



Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Sprague 3AA-9H-N267 |
| Project: | DJ Wattenberg | TVD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | Database: | USA EDM 5000 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 | | |

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|-----------------------|----------|-----------------------|-----------------|-------------------|-------------|
| Site | | S9-T2N-R67W (Sprague) | | | |
| Site Position: | | Northing: | 1,298,443.90 ft | Latitude: | 40.151070 |
| From: | Lat/Long | Easting: | 3,167,093.12 ft | Longitude: | -104.902260 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: | 0.39 ° |

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|----------------------|---------------------|--------|---------------------|-----------------|---------------|-------------|
| Well | Sprague 3AA-9H-N267 | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,296,975.37 ft | Latitude: | 40.147020 |
| | +E/-W | 0.0 ft | Easting: | 3,168,107.84 ft | Longitude: | -104.898666 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,982.6 ft |

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|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Hz | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 12/20/2014 | 8.44 | 66.70 | 52,613 |

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|--------------------------|-------------------------|---------------|--------------|----------------------|-----|
| Design | FINAL | | | | |
| 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 | 0.00 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 1/11/2015 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 134.0 | 12,991.0 | 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 | | |
| 134.0 | 0.20 | 313.30 | 134.0 | 0.2 | -0.2 | 0.2 | 0.15 | 0.15 | | |
| 229.0 | 1.40 | 267.50 | 229.0 | 0.2 | -1.5 | 0.2 | 1.34 | 1.26 | | |
| 323.0 | 3.10 | 258.10 | 322.9 | -0.4 | -5.1 | -0.4 | 1.84 | 1.81 | | |
| 416.0 | 5.50 | 256.40 | 415.6 | -1.9 | -11.9 | -1.9 | 2.58 | 2.58 | | |
| 511.0 | 7.10 | 254.80 | 510.1 | -4.5 | -22.0 | -4.5 | 1.69 | 1.68 | | |
| 604.0 | 8.70 | 250.50 | 602.2 | -8.4 | -34.1 | -8.4 | 1.83 | 1.72 | | |
| 698.0 | 10.80 | 248.70 | 694.8 | -14.0 | -49.1 | -14.0 | 2.26 | 2.23 | | |
| 791.0 | 11.80 | 246.40 | 786.0 | -20.9 | -65.9 | -20.9 | 1.18 | 1.08 | | |
| 824.0 | 12.10 | 247.20 | 818.3 | -23.6 | -72.2 | -23.6 | 1.04 | 0.91 | | |
| 888.0 | 12.70 | 246.60 | 880.8 | -29.0 | -84.8 | -29.0 | 0.96 | 0.94 | | |
| 983.0 | 12.70 | 246.30 | 973.5 | -37.4 | -104.0 | -37.4 | 0.07 | 0.00 | | |
| 1,075.0 | 12.40 | 243.50 | 1,063.3 | -45.8 | -122.1 | -45.8 | 0.74 | -0.33 | | |

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| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | 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 |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 1,170.0 | 13.80 | 245.60 | 1,155.8 | -55.1 | -141.5 | -55.1 | 1.56 | 1.47 | |
| 1,264.0 | 14.00 | 251.70 | 1,247.1 | -63.3 | -162.5 | -63.3 | 1.57 | 0.21 | |
| 1,357.0 | 13.90 | 250.40 | 1,337.3 | -70.5 | -183.7 | -70.5 | 0.35 | -0.11 | |
| 1,452.0 | 13.30 | 251.30 | 1,429.7 | -77.9 | -204.8 | -77.9 | 0.67 | -0.63 | |
| 1,545.0 | 13.20 | 250.50 | 1,520.2 | -84.8 | -225.0 | -84.8 | 0.22 | -0.11 | |
| 1,639.0 | 12.60 | 247.00 | 1,611.8 | -92.4 | -244.5 | -92.4 | 1.05 | -0.64 | |
| 1,732.0 | 12.20 | 250.40 | 1,702.6 | -99.7 | -263.1 | -99.7 | 0.89 | -0.43 | |
| 1,826.0 | 12.20 | 254.60 | 1,794.5 | -105.7 | -282.0 | -105.7 | 0.94 | 0.00 | |
| 1,919.0 | 12.30 | 253.40 | 1,885.4 | -111.1 | -301.0 | -111.1 | 0.29 | 0.11 | |
| 2,013.0 | 12.00 | 252.70 | 1,977.3 | -116.9 | -319.9 | -116.9 | 0.36 | -0.32 | |
| 2,107.0 | 12.00 | 253.00 | 2,069.2 | -122.6 | -338.6 | -122.6 | 0.07 | 0.00 | |
| 2,201.0 | 11.80 | 251.70 | 2,161.2 | -128.5 | -357.1 | -128.5 | 0.36 | -0.21 | |
| 2,294.0 | 12.50 | 252.70 | 2,252.1 | -134.5 | -375.7 | -134.5 | 0.79 | 0.75 | |
| 2,388.0 | 12.40 | 252.10 | 2,343.9 | -140.6 | -395.0 | -140.6 | 0.17 | -0.11 | |
| 2,482.0 | 12.00 | 250.90 | 2,435.8 | -146.9 | -413.9 | -146.9 | 0.50 | -0.43 | |
| 2,577.0 | 12.20 | 251.50 | 2,528.7 | -153.3 | -432.7 | -153.3 | 0.25 | 0.21 | |
| 2,671.0 | 11.80 | 249.40 | 2,620.6 | -159.9 | -451.1 | -159.9 | 0.63 | -0.43 | |
| 2,766.0 | 13.10 | 247.90 | 2,713.4 | -167.3 | -470.2 | -167.3 | 1.41 | 1.37 | |
| 2,860.0 | 13.10 | 248.50 | 2,805.0 | -175.2 | -490.0 | -175.2 | 0.14 | 0.00 | |
| 2,955.0 | 12.30 | 246.30 | 2,897.6 | -183.3 | -509.3 | -183.3 | 0.98 | -0.84 | |
| 3,049.0 | 13.10 | 255.20 | 2,989.3 | -190.0 | -528.7 | -190.0 | 2.25 | 0.85 | |
| 3,144.0 | 12.00 | 253.20 | 3,082.1 | -195.6 | -548.6 | -195.6 | 1.24 | -1.16 | |
| 3,239.0 | 13.10 | 253.00 | 3,174.8 | -201.6 | -568.3 | -201.6 | 1.16 | 1.16 | |
| 3,333.0 | 12.20 | 252.20 | 3,266.5 | -207.8 | -588.0 | -207.8 | 0.98 | -0.96 | |
| 3,427.0 | 12.70 | 251.20 | 3,358.3 | -214.1 | -607.2 | -214.1 | 0.58 | 0.53 | |
| 3,522.0 | 13.20 | 249.10 | 3,450.9 | -221.4 | -627.3 | -221.4 | 0.72 | 0.53 | |
| 3,616.0 | 13.10 | 249.90 | 3,542.4 | -228.9 | -647.3 | -228.9 | 0.22 | -0.11 | |
| 3,711.0 | 13.50 | 246.70 | 3,634.9 | -236.9 | -667.6 | -236.9 | 0.88 | 0.42 | |
| 3,805.0 | 12.50 | 244.40 | 3,726.5 | -245.7 | -686.8 | -245.7 | 1.20 | -1.06 | |
| 3,900.0 | 12.30 | 249.30 | 3,819.3 | -253.7 | -705.6 | -253.7 | 1.13 | -0.21 | |
| 3,994.0 | 12.20 | 249.50 | 3,911.1 | -260.7 | -724.2 | -260.7 | 0.12 | -0.11 | |
| 4,089.0 | 12.40 | 246.20 | 4,003.9 | -268.3 | -743.0 | -268.3 | 0.77 | 0.21 | |
| 4,184.0 | 13.50 | 247.90 | 4,096.5 | -276.6 | -762.6 | -276.6 | 1.23 | 1.16 | |
| 4,278.0 | 13.90 | 252.20 | 4,187.8 | -284.2 | -783.5 | -284.2 | 1.16 | 0.43 | |
| 4,373.0 | 13.40 | 251.60 | 4,280.2 | -291.2 | -804.8 | -291.2 | 0.55 | -0.53 | |
| 4,468.0 | 11.40 | 249.50 | 4,372.9 | -297.9 | -824.0 | -297.9 | 2.16 | -2.11 | |
| 4,563.0 | 12.10 | 253.80 | 4,466.0 | -304.0 | -842.4 | -304.0 | 1.18 | 0.74 | |
| 4,657.0 | 13.50 | 255.20 | 4,557.6 | -309.6 | -862.5 | -309.6 | 1.53 | 1.49 | |
| 4,751.0 | 13.30 | 253.70 | 4,649.1 | -315.4 | -883.5 | -315.4 | 0.43 | -0.21 | |
| 4,846.0 | 13.60 | 258.00 | 4,741.5 | -320.8 | -904.9 | -320.8 | 1.10 | 0.32 | |
| 4,940.0 | 12.10 | 258.30 | 4,833.1 | -325.1 | -925.3 | -325.1 | 1.60 | -1.60 | |
| 5,034.0 | 12.90 | 250.50 | 4,924.9 | -330.6 | -944.9 | -330.6 | 1.99 | 0.85 | |
| 5,129.0 | 13.40 | 248.10 | 5,017.4 | -338.2 | -965.1 | -338.2 | 0.78 | 0.53 | |
| 5,224.0 | 14.00 | 247.20 | 5,109.7 | -346.8 | -985.9 | -346.8 | 0.67 | 0.63 | |
| 5,318.0 | 12.70 | 245.30 | 5,201.1 | -355.5 | -1,005.8 | -355.5 | 1.46 | -1.38 | |
| 5,413.0 | 12.00 | 246.90 | 5,293.9 | -363.7 | -1,024.3 | -363.7 | 0.82 | -0.74 | |
| 5,507.0 | 11.80 | 247.80 | 5,385.9 | -371.2 | -1,042.2 | -371.2 | 0.29 | -0.21 | |
| 5,602.0 | 12.40 | 249.30 | 5,478.8 | -378.5 | -1,060.8 | -378.5 | 0.71 | 0.63 | |
| 5,696.0 | 12.30 | 250.50 | 5,570.6 | -385.4 | -1,079.6 | -385.4 | 0.29 | -0.11 | |
| 5,791.0 | 11.90 | 252.20 | 5,663.5 | -391.8 | -1,098.5 | -391.8 | 0.56 | -0.42 | |
| 5,885.0 | 12.40 | 253.30 | 5,755.4 | -397.6 | -1,117.4 | -397.6 | 0.59 | 0.53 | |
| 5,981.0 | 11.70 | 256.20 | 5,849.3 | -402.9 | -1,136.7 | -402.9 | 0.96 | -0.73 | |
| 6,075.0 | 12.10 | 253.70 | 5,941.3 | -408.0 | -1,155.4 | -408.0 | 0.69 | 0.43 | |

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| 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 |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|-----------------------|
| 6,170.0 | 12.00 | 250.50 | 6,034.2 | -414.0 | -1,174.3 | -414.0 | 0.71 | -0.11 | |
| 6,264.0 | 12.10 | 247.60 | 6,126.1 | -421.1 | -1,192.6 | -421.1 | 0.65 | 0.11 | |
| 6,359.0 | 13.30 | 250.10 | 6,218.8 | -428.6 | -1,212.1 | -428.6 | 1.39 | 1.26 | |
| 6,453.0 | 13.80 | 248.70 | 6,310.2 | -436.3 | -1,232.7 | -436.3 | 0.64 | 0.53 | |
| 6,548.0 | 14.30 | 248.00 | 6,402.3 | -444.8 | -1,254.1 | -444.8 | 0.56 | 0.53 | |
| 6,595.0 | 14.60 | 255.50 | 6,447.9 | -448.5 | -1,265.3 | -448.5 | 4.03 | 0.64 | |
| 6,642.0 | 14.60 | 264.40 | 6,493.3 | -450.6 | -1,276.9 | -450.6 | 4.77 | 0.00 | |
| 6,689.0 | 14.60 | 272.30 | 6,538.8 | -450.9 | -1,288.7 | -450.9 | 4.23 | 0.00 | |
| 6,737.0 | 14.40 | 282.20 | 6,585.3 | -449.4 | -1,300.6 | -449.4 | 5.17 | -0.42 | |
| 6,784.0 | 14.50 | 292.30 | 6,630.8 | -445.9 | -1,311.7 | -445.9 | 5.36 | 0.21 | |
| 6,831.0 | 14.70 | 301.50 | 6,676.3 | -440.6 | -1,322.3 | -440.6 | 4.95 | 0.43 | |
| 6,878.0 | 15.10 | 309.30 | 6,721.7 | -433.6 | -1,332.1 | -433.6 | 4.35 | 0.85 | |
| 6,926.0 | 16.10 | 315.50 | 6,768.0 | -424.9 | -1,341.6 | -424.9 | 4.05 | 2.08 | |
| 6,973.0 | 17.90 | 321.40 | 6,812.9 | -414.6 | -1,350.7 | -414.6 | 5.30 | 3.83 | |
| 7,020.0 | 19.70 | 324.00 | 6,857.4 | -402.5 | -1,359.8 | -402.5 | 4.22 | 3.83 | |
| 7,067.0 | 21.80 | 328.40 | 6,901.4 | -388.7 | -1,369.1 | -388.7 | 5.56 | 4.47 | |
| 7,115.0 | 23.40 | 331.20 | 6,945.7 | -372.7 | -1,378.3 | -372.7 | 4.02 | 3.33 | |
| 7,162.0 | 25.70 | 332.80 | 6,988.4 | -355.5 | -1,387.5 | -355.5 | 5.09 | 4.89 | |
| 7,209.0 | 28.10 | 334.30 | 7,030.3 | -336.5 | -1,397.0 | -336.5 | 5.31 | 5.11 | |
| 7,256.0 | 30.50 | 337.70 | 7,071.3 | -315.4 | -1,406.3 | -315.4 | 6.21 | 5.11 | |
| 7,303.0 | 33.40 | 339.80 | 7,111.2 | -292.3 | -1,415.3 | -292.3 | 6.61 | 6.17 | |
| 7,350.0 | 35.60 | 342.10 | 7,149.9 | -267.1 | -1,423.9 | -267.1 | 5.44 | 4.68 | |
| 7,398.0 | 38.80 | 343.60 | 7,188.2 | -239.4 | -1,432.5 | -239.4 | 6.93 | 6.67 | |
| 7,445.0 | 41.60 | 343.90 | 7,224.1 | -210.2 | -1,441.0 | -210.2 | 5.97 | 5.96 | |
| 7,492.0 | 45.30 | 344.90 | 7,258.2 | -179.1 | -1,449.7 | -179.1 | 8.01 | 7.87 | |
| 7,539.0 | 48.10 | 345.70 | 7,290.4 | -146.0 | -1,458.3 | -146.0 | 6.08 | 5.96 | |
| 7,587.0 | 51.40 | 346.20 | 7,321.4 | -110.5 | -1,467.2 | -110.5 | 6.92 | 6.87 | |
| 7,634.0 | 54.70 | 346.80 | 7,349.7 | -74.0 | -1,476.0 | -74.0 | 7.09 | 7.02 | |
| 7,682.0 | 57.20 | 347.80 | 7,376.5 | -35.2 | -1,484.7 | -35.2 | 5.49 | 5.21 | |
| 7,729.0 | 60.00 | 349.40 | 7,401.0 | 4.1 | -1,492.6 | 4.1 | 6.63 | 5.96 | |
| 7,776.0 | 63.10 | 350.20 | 7,423.4 | 44.8 | -1,500.0 | 44.8 | 6.76 | 6.60 | |
| 7,823.0 | 66.00 | 351.50 | 7,443.6 | 86.7 | -1,506.7 | 86.7 | 6.66 | 6.17 | |
| 7,870.0 | 68.60 | 353.30 | 7,461.8 | 129.7 | -1,512.4 | 129.7 | 6.56 | 5.53 | |
| 7,917.0 | 71.90 | 355.30 | 7,477.6 | 173.7 | -1,516.8 | 173.7 | 8.08 | 7.02 | |
| 7,965.0 | 75.10 | 356.80 | 7,491.3 | 219.6 | -1,520.0 | 219.6 | 7.31 | 6.67 | |
| 8,012.0 | 77.60 | 358.30 | 7,502.4 | 265.2 | -1,521.9 | 265.2 | 6.16 | 5.32 | |
| 8,059.0 | 79.30 | 359.30 | 7,511.8 | 311.2 | -1,522.9 | 311.2 | 4.17 | 3.62 | |
| 8,111.0 | 82.40 | 0.60 | 7,520.0 | 362.6 | -1,522.9 | 362.6 | 6.45 | 5.96 | |
| 8,169.0 | 84.70 | 1.70 | 7,526.5 | 420.2 | -1,521.8 | 420.2 | 4.39 | 3.97 | |
| 8,263.0 | 87.50 | 1.00 | 7,532.9 | 513.9 | -1,519.6 | 513.9 | 3.07 | 2.98 | |
| 8,358.0 | 90.40 | 1.80 | 7,534.7 | 608.9 | -1,517.2 | 608.9 | 3.17 | 3.05 | |
| 8,452.0 | 90.20 | 1.90 | 7,534.2 | 702.8 | -1,514.2 | 702.8 | 0.24 | -0.21 | |
| 8,546.0 | 89.80 | 1.40 | 7,534.2 | 796.8 | -1,511.5 | 796.8 | 0.68 | -0.43 | |
| 8,641.0 | 91.20 | 1.30 | 7,533.4 | 891.8 | -1,509.3 | 891.8 | 1.48 | 1.47 | |
| 8,735.0 | 89.70 | 359.50 | 7,532.6 | 985.8 | -1,508.6 | 985.8 | 2.49 | -1.60 | |
| 8,830.0 | 90.60 | 1.80 | 7,532.4 | 1,080.7 | -1,507.5 | 1,080.7 | 2.60 | 0.95 | |
| 8,924.0 | 90.20 | 2.60 | 7,531.7 | 1,174.7 | -1,503.9 | 1,174.7 | 0.95 | -0.43 | |
| 9,019.0 | 90.40 | 1.20 | 7,531.2 | 1,269.6 | -1,500.8 | 1,269.6 | 1.49 | 0.21 | |
| 9,113.0 | 89.80 | 0.70 | 7,531.1 | 1,363.6 | -1,499.2 | 1,363.6 | 0.83 | -0.64 | |
| 9,207.0 | 90.10 | 358.30 | 7,531.1 | 1,457.6 | -1,500.0 | 1,457.6 | 2.57 | 0.32 | |
| 9,301.0 | 90.10 | 359.00 | 7,531.0 | 1,551.6 | -1,502.2 | 1,551.6 | 0.74 | 0.00 | |
| 9,396.0 | 90.10 | 0.20 | 7,530.8 | 1,646.6 | -1,502.9 | 1,646.6 | 1.26 | 0.00 | |
| 9,490.0 | 89.60 | 0.00 | 7,531.1 | 1,740.6 | -1,502.7 | 1,740.6 | 0.57 | -0.53 | |

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| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
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|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|------------------------------|
| 9,584.0 | 91.30 | 0.20 | 7,530.3 | 1,834.5 | -1,502.6 | 1,834.5 | 1.82 | 1.81 | |
| 9,679.0 | 91.80 | 0.00 | 7,527.7 | 1,929.5 | -1,502.4 | 1,929.5 | 0.57 | 0.53 | |
| 9,773.0 | 90.20 | 359.80 | 7,526.1 | 2,023.5 | -1,502.6 | 2,023.5 | 1.72 | -1.70 | |
| 9,867.0 | 90.40 | 0.60 | 7,525.6 | 2,117.5 | -1,502.2 | 2,117.5 | 0.88 | 0.21 | |
| 9,961.0 | 90.20 | 0.50 | 7,525.1 | 2,211.5 | -1,501.3 | 2,211.5 | 0.24 | -0.21 | |
| 10,056.0 | 89.60 | 359.80 | 7,525.3 | 2,306.5 | -1,501.1 | 2,306.5 | 0.97 | -0.63 | |
| 10,150.0 | 89.20 | 358.90 | 7,526.3 | 2,400.5 | -1,502.2 | 2,400.5 | 1.05 | -0.43 | |
| 10,244.0 | 89.00 | 358.90 | 7,527.7 | 2,494.4 | -1,504.0 | 2,494.4 | 0.21 | -0.21 | |
| 10,338.0 | 90.40 | 359.70 | 7,528.2 | 2,588.4 | -1,505.1 | 2,588.4 | 1.72 | 1.49 | |
| 10,433.0 | 89.90 | 358.90 | 7,528.0 | 2,683.4 | -1,506.3 | 2,683.4 | 0.99 | -0.53 | |
| 10,527.0 | 88.80 | 356.60 | 7,529.1 | 2,777.3 | -1,510.0 | 2,777.3 | 2.71 | -1.17 | |
| 10,621.0 | 88.70 | 357.80 | 7,531.1 | 2,871.2 | -1,514.6 | 2,871.2 | 1.28 | -0.11 | |
| 10,715.0 | 90.40 | 0.90 | 7,531.8 | 2,965.2 | -1,515.6 | 2,965.2 | 3.76 | 1.81 | |
| 10,810.0 | 90.10 | 0.40 | 7,531.4 | 3,060.2 | -1,514.5 | 3,060.2 | 0.61 | -0.32 | |
| 10,904.0 | 89.40 | 359.80 | 7,531.8 | 3,154.2 | -1,514.4 | 3,154.2 | 0.98 | -0.74 | |
| 10,998.0 | 89.50 | 1.20 | 7,532.7 | 3,248.2 | -1,513.6 | 3,248.2 | 1.49 | 0.11 | |
| 11,092.0 | 90.70 | 1.70 | 7,532.6 | 3,342.1 | -1,511.2 | 3,342.1 | 1.38 | 1.28 | |
| 11,186.0 | 90.40 | 1.40 | 7,531.7 | 3,436.1 | -1,508.6 | 3,436.1 | 0.45 | -0.32 | |
| 11,281.0 | 90.40 | 1.20 | 7,531.0 | 3,531.1 | -1,506.5 | 3,531.1 | 0.21 | 0.00 | |
| 11,375.0 | 90.10 | 359.80 | 7,530.6 | 3,625.1 | -1,505.7 | 3,625.1 | 1.52 | -0.32 | |
| 11,469.0 | 89.90 | 0.00 | 7,530.6 | 3,719.1 | -1,505.8 | 3,719.1 | 0.30 | -0.21 | |
| 11,564.0 | 89.80 | 0.50 | 7,530.9 | 3,814.1 | -1,505.4 | 3,814.1 | 0.54 | -0.11 | |
| 11,659.0 | 90.20 | 0.40 | 7,530.9 | 3,909.0 | -1,504.7 | 3,909.0 | 0.43 | 0.42 | |
| 11,753.0 | 89.80 | 0.40 | 7,530.9 | 4,003.0 | -1,504.0 | 4,003.0 | 0.43 | -0.43 | |
| 11,847.0 | 89.10 | 359.60 | 7,531.8 | 4,097.0 | -1,504.0 | 4,097.0 | 1.13 | -0.74 | |
| 11,942.0 | 89.50 | 359.80 | 7,532.9 | 4,192.0 | -1,504.5 | 4,192.0 | 0.47 | 0.42 | |
| 12,036.0 | 89.60 | 359.20 | 7,533.7 | 4,286.0 | -1,505.3 | 4,286.0 | 0.65 | 0.11 | |
| 12,131.0 | 90.50 | 359.80 | 7,533.6 | 4,381.0 | -1,506.2 | 4,381.0 | 1.14 | 0.95 | |
| 12,225.0 | 90.50 | 0.10 | 7,532.8 | 4,475.0 | -1,506.2 | 4,475.0 | 0.32 | 0.00 | |
| 12,319.0 | 90.50 | 0.80 | 7,531.9 | 4,569.0 | -1,505.5 | 4,569.0 | 0.74 | 0.00 | |
| 12,414.0 | 90.20 | 1.40 | 7,531.4 | 4,664.0 | -1,503.7 | 4,664.0 | 0.71 | -0.32 | |
| 12,508.0 | 89.70 | 0.80 | 7,531.4 | 4,758.0 | -1,501.9 | 4,758.0 | 0.83 | -0.53 | |
| 12,603.0 | 90.60 | 0.90 | 7,531.2 | 4,853.0 | -1,500.5 | 4,853.0 | 0.95 | 0.95 | |
| 12,697.0 | 90.70 | 1.50 | 7,530.1 | 4,946.9 | -1,498.5 | 4,946.9 | 0.65 | 0.11 | |
| 12,791.0 | 90.90 | 1.80 | 7,528.8 | 5,040.9 | -1,495.8 | 5,040.9 | 0.38 | 0.21 | |
| 12,886.0 | 90.80 | 2.60 | 7,527.4 | 5,135.8 | -1,492.1 | 5,135.8 | 0.85 | -0.11 | |
| 12,936.0 | 90.80 | 2.70 | 7,526.7 | 5,185.7 | -1,489.8 | 5,185.7 | 0.20 | 0.00 | Last CES Survey @ 12,936' MD |
| 12,991.0 | 90.80 | 2.70 | 7,525.9 | 5,240.7 | -1,487.2 | 5,240.7 | 0.00 | 0.00 | PTB @ 12,991' MD |

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Sprague 3AA-9H-N267 |
| Project: | DJ Wattenberg | TVD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | Database: | USA EDM 5000 Multi Users DB |

| Targets | | | | | | | | | |
|--|-----------|----------|---------|---------|----------|--------------|--------------|-----------|-------------|
| Target Name | | | | | | | | | |
| - hit/miss target | Dip Angle | Dip Dir. | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| - Shape | (°) | (°) | (ft) | (ft) | (ft) | (ft) | (ft) | | |
| Sprague 3A-9H-N267 PI | 0.00 | 0.39 | 7,307.1 | 5,238.4 | -1,284.9 | 1,302,204.97 | 3,166,787.45 | 40.161400 | -104.903263 |
| - survey misses target center by 298.1ft at 12991.0ft MD (7525.9 TVD, 5240.7 N, -1487.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Sprague 3AA-9H-N267 I | 0.00 | 0.39 | 7,526.6 | 5,238.4 | -1,504.9 | 1,302,203.48 | 3,166,567.48 | 40.161400 | -104.904050 |
| - survey misses target center by 17.5ft at 12987.9ft MD (7526.0 TVD, 5237.6 N, -1487.4 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Interp @ 7519.0 (Spragu | 0.00 | 0.00 | 7,519.1 | 164.8 | -1,503.6 | 1,297,130.02 | 3,166,603.17 | 40.147472 | -104.904044 |
| - survey misses target center by 44.3ft at 7919.5ft MD (7478.4 TVD, 176.0 N, -1517.0 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Sprague 3AA-9H-N267 I | 0.00 | 0.39 | 7,520.0 | 5,238.4 | -1,504.9 | 1,302,203.48 | 3,166,567.48 | 40.161400 | -104.904050 |
| - survey misses target center by 18.5ft at 12988.0ft MD (7526.0 TVD, 5237.7 N, -1487.4 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Sprague 3X-9H-N267 PI | 0.00 | 0.39 | 7,307.1 | 5,238.4 | -1,504.9 | 1,302,203.48 | 3,166,567.48 | 40.161400 | -104.904050 |
| - survey misses target center by 219.6ft at 12991.0ft MD (7525.9 TVD, 5240.7 N, -1487.2 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| Survey Annotations | | | | | |
|--------------------|----------------|-------------------|------------|------------------------------|--|
| Measured Depth | Vertical Depth | Local Coordinates | | | |
| (ft) | (ft) | +N/-S (ft) | +E/-W (ft) | Comment | |
| 12,936.0 | 7,526.7 | 5,185.7 | -1,489.8 | Last CES Survey @ 12,936' MD | |
| 12,991.0 | 7,525.9 | 5,240.7 | -1,487.2 | PTB @ 12,991' MD | |

Checked By: _____ Approved By: _____ Date: _____

EnCana Oil & Gas (USA) Inc

DJ Wattenberg

S9-T2N-R67W (Sprague)

Sprague 3AA-9H-N267

Hz

Survey: Survey #1

Survey Report - Geographic

11 January, 2015

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Sprague 3AA-9H-N267 |
| Project: | DJ Wattenberg | TVD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | Database: | USA EDM 5000 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 | S9-T2N-R67W (Sprague) | | | | |
| Site Position: | | Northing: | 1,298,443.90 ft | Latitude: | 40.151070 |
| From: | Lat/Long | Easting: | 3,167,093.12 ft | Longitude: | -104.902260 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13.200 in | Grid Convergence: | 0.39 ° |

| | | | | | | |
|----------------------|---------------------|--------|---------------------|-----------------|---------------|-------------|
| Well | Sprague 3AA-9H-N267 | | | | | |
| Well Position | +N/-S | 0.0 ft | Northing: | 1,296,975.37 ft | Latitude: | 40.147020 |
| | +E/-W | 0.0 ft | Easting: | 3,168,107.84 ft | Longitude: | -104.898666 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,982.6 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Hz | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 12/20/2014 | 8.44 | 66.70 | 52,613 |

| | | | | | |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|------|
| Design | FINAL | | | | |
| 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 | | 0.00 |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 1/11/2015 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 134.0 | 12,991.0 | 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 | 1,296,975.37 | 3,168,107.84 | 40.147020 | -104.898666 | |
| 134.0 | 0.20 | 313.30 | 134.0 | 0.2 | -0.2 | 1,296,975.53 | 3,168,107.67 | 40.147020 | -104.898667 | |
| 229.0 | 1.40 | 267.50 | 229.0 | 0.2 | -1.5 | 1,296,975.59 | 3,168,106.39 | 40.147021 | -104.898671 | |
| 323.0 | 3.10 | 258.10 | 322.9 | -0.4 | -5.1 | 1,296,974.99 | 3,168,102.76 | 40.147019 | -104.898684 | |
| 416.0 | 5.50 | 256.40 | 415.6 | -1.9 | -11.9 | 1,296,973.37 | 3,168,095.98 | 40.147015 | -104.898708 | |
| 511.0 | 7.10 | 254.80 | 510.1 | -4.5 | -22.0 | 1,296,970.70 | 3,168,085.91 | 40.147008 | -104.898745 | |
| 604.0 | 8.70 | 250.50 | 602.2 | -8.4 | -34.1 | 1,296,966.76 | 3,168,073.75 | 40.146997 | -104.898788 | |
| 698.0 | 10.80 | 248.70 | 694.8 | -14.0 | -49.1 | 1,296,961.08 | 3,168,058.88 | 40.146982 | -104.898841 | |
| 791.0 | 11.80 | 246.40 | 786.0 | -20.9 | -65.9 | 1,296,954.00 | 3,168,042.10 | 40.146963 | -104.898902 | |
| 824.0 | 12.10 | 247.20 | 818.3 | -23.6 | -72.2 | 1,296,951.26 | 3,168,035.84 | 40.146955 | -104.898924 | |
| 888.0 | 12.70 | 246.60 | 880.8 | -29.0 | -84.8 | 1,296,945.79 | 3,168,023.23 | 40.146940 | -104.898969 | |
| 983.0 | 12.70 | 246.30 | 973.5 | -37.4 | -104.0 | 1,296,937.31 | 3,168,004.15 | 40.146917 | -104.899038 | |

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Sprague 3AA-9H-N267 |
| Project: | DJ Wattenberg | TVD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | Database: | USA EDM 5000 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 |
| 1,075.0 | 12.40 | 243.50 | 1,063.3 | -45.8 | -122.1 | 1,296,928.72 | 3,167,986.10 | 40.146894 | -104.899103 |
| 1,170.0 | 13.80 | 245.60 | 1,155.8 | -55.1 | -141.5 | 1,296,919.35 | 3,167,966.72 | 40.146869 | -104.899172 |
| 1,264.0 | 14.00 | 251.70 | 1,247.1 | -63.3 | -162.5 | 1,296,911.01 | 3,167,945.77 | 40.146846 | -104.899247 |
| 1,357.0 | 13.90 | 250.40 | 1,337.3 | -70.5 | -183.7 | 1,296,903.59 | 3,167,924.61 | 40.146826 | -104.899323 |
| 1,452.0 | 13.30 | 251.30 | 1,429.7 | -77.9 | -204.8 | 1,296,896.11 | 3,167,903.56 | 40.146806 | -104.899399 |
| 1,545.0 | 13.20 | 250.50 | 1,520.2 | -84.8 | -225.0 | 1,296,889.00 | 3,167,883.47 | 40.146787 | -104.899471 |
| 1,639.0 | 12.60 | 247.00 | 1,611.8 | -92.4 | -244.5 | 1,296,881.28 | 3,167,863.97 | 40.146766 | -104.899541 |
| 1,732.0 | 12.20 | 250.40 | 1,702.6 | -99.7 | -263.1 | 1,296,873.89 | 3,167,845.42 | 40.146746 | -104.899607 |
| 1,826.0 | 12.20 | 254.60 | 1,794.5 | -105.7 | -282.0 | 1,296,867.80 | 3,167,826.53 | 40.146730 | -104.899675 |
| 1,919.0 | 12.30 | 253.40 | 1,885.4 | -111.1 | -301.0 | 1,296,862.23 | 3,167,807.60 | 40.146715 | -104.899743 |
| 2,013.0 | 12.00 | 252.70 | 1,977.3 | -116.9 | -319.9 | 1,296,856.33 | 3,167,788.71 | 40.146699 | -104.899810 |
| 2,107.0 | 12.00 | 253.00 | 2,069.2 | -122.6 | -338.6 | 1,296,850.44 | 3,167,770.08 | 40.146683 | -104.899877 |
| 2,201.0 | 11.80 | 251.70 | 2,161.2 | -128.5 | -357.1 | 1,296,844.44 | 3,167,751.65 | 40.146667 | -104.899943 |
| 2,294.0 | 12.50 | 252.70 | 2,252.1 | -134.5 | -375.7 | 1,296,838.34 | 3,167,733.05 | 40.146651 | -104.900010 |
| 2,388.0 | 12.40 | 252.10 | 2,343.9 | -140.6 | -395.0 | 1,296,832.08 | 3,167,713.78 | 40.146634 | -104.900079 |
| 2,482.0 | 12.00 | 250.90 | 2,435.8 | -146.9 | -413.9 | 1,296,825.65 | 3,167,694.98 | 40.146617 | -104.900146 |
| 2,577.0 | 12.20 | 251.50 | 2,528.7 | -153.3 | -432.7 | 1,296,819.11 | 3,167,676.18 | 40.146599 | -104.900214 |
| 2,671.0 | 11.80 | 249.40 | 2,620.6 | -159.9 | -451.1 | 1,296,812.45 | 3,167,657.80 | 40.146581 | -104.900280 |
| 2,766.0 | 13.10 | 247.90 | 2,713.4 | -167.3 | -470.2 | 1,296,804.85 | 3,167,638.79 | 40.146561 | -104.900348 |
| 2,860.0 | 13.10 | 248.50 | 2,805.0 | -175.2 | -490.0 | 1,296,796.81 | 3,167,619.06 | 40.146539 | -104.900419 |
| 2,955.0 | 12.30 | 246.30 | 2,897.6 | -183.3 | -509.3 | 1,296,788.66 | 3,167,599.83 | 40.146517 | -104.900488 |
| 3,049.0 | 13.10 | 255.20 | 2,989.3 | -190.0 | -528.7 | 1,296,781.79 | 3,167,580.41 | 40.146498 | -104.900557 |
| 3,144.0 | 12.00 | 253.20 | 3,082.1 | -195.6 | -548.6 | 1,296,776.05 | 3,167,560.58 | 40.146483 | -104.900628 |
| 3,239.0 | 13.10 | 253.00 | 3,174.8 | -201.6 | -568.3 | 1,296,769.91 | 3,167,540.87 | 40.146467 | -104.900699 |
| 3,333.0 | 12.20 | 252.20 | 3,266.5 | -207.8 | -588.0 | 1,296,763.63 | 3,167,521.27 | 40.146450 | -104.900769 |
| 3,427.0 | 12.70 | 251.20 | 3,358.3 | -214.1 | -607.2 | 1,296,757.13 | 3,167,502.08 | 40.146432 | -104.900838 |
| 3,522.0 | 13.20 | 249.10 | 3,450.9 | -221.4 | -627.3 | 1,296,749.76 | 3,167,482.11 | 40.146412 | -104.900910 |
| 3,616.0 | 13.10 | 249.90 | 3,542.4 | -228.9 | -647.3 | 1,296,742.13 | 3,167,462.13 | 40.146392 | -104.900981 |
| 3,711.0 | 13.50 | 246.70 | 3,634.9 | -236.9 | -667.6 | 1,296,733.91 | 3,167,441.89 | 40.146370 | -104.901054 |
| 3,805.0 | 12.50 | 244.40 | 3,726.5 | -245.7 | -686.8 | 1,296,725.04 | 3,167,422.70 | 40.146346 | -104.901123 |
| 3,900.0 | 12.30 | 249.30 | 3,819.3 | -253.7 | -705.6 | 1,296,716.90 | 3,167,404.01 | 40.146324 | -104.901190 |
| 3,994.0 | 12.20 | 249.50 | 3,911.1 | -260.7 | -724.2 | 1,296,709.75 | 3,167,385.39 | 40.146304 | -104.901257 |
| 4,089.0 | 12.40 | 246.20 | 4,003.9 | -268.3 | -743.0 | 1,296,702.00 | 3,167,366.71 | 40.146283 | -104.901324 |
| 4,184.0 | 13.50 | 247.90 | 4,096.5 | -276.6 | -762.6 | 1,296,693.57 | 3,167,347.16 | 40.146261 | -104.901394 |
| 4,278.0 | 13.90 | 252.20 | 4,187.8 | -284.2 | -783.5 | 1,296,685.85 | 3,167,326.30 | 40.146240 | -104.901469 |
| 4,373.0 | 13.40 | 251.60 | 4,280.2 | -291.2 | -804.8 | 1,296,678.75 | 3,167,305.03 | 40.146221 | -104.901545 |
| 4,468.0 | 11.40 | 249.50 | 4,372.9 | -297.9 | -824.0 | 1,296,671.85 | 3,167,285.84 | 40.146202 | -104.901614 |
| 4,563.0 | 12.10 | 253.80 | 4,466.0 | -304.0 | -842.4 | 1,296,665.66 | 3,167,267.52 | 40.146185 | -104.901679 |
| 4,657.0 | 13.50 | 255.20 | 4,557.6 | -309.6 | -862.5 | 1,296,659.97 | 3,167,247.49 | 40.146170 | -104.901751 |
| 4,751.0 | 13.30 | 253.70 | 4,649.1 | -315.4 | -883.5 | 1,296,653.99 | 3,167,226.55 | 40.146154 | -104.901826 |
| 4,846.0 | 13.60 | 258.00 | 4,741.5 | -320.8 | -904.9 | 1,296,648.46 | 3,167,205.17 | 40.146139 | -104.901903 |
| 4,940.0 | 12.10 | 258.30 | 4,833.1 | -325.1 | -925.3 | 1,296,644.03 | 3,167,184.74 | 40.146128 | -104.901976 |
| 5,034.0 | 12.90 | 250.50 | 4,924.9 | -330.6 | -944.9 | 1,296,638.39 | 3,167,165.24 | 40.146113 | -104.902046 |
| 5,129.0 | 13.40 | 248.10 | 5,017.4 | -338.2 | -965.1 | 1,296,630.61 | 3,167,145.08 | 40.146092 | -104.902118 |
| 5,224.0 | 14.00 | 247.20 | 5,109.7 | -346.8 | -985.9 | 1,296,621.91 | 3,167,124.33 | 40.146068 | -104.902193 |
| 5,318.0 | 12.70 | 245.30 | 5,201.1 | -355.5 | -1,005.8 | 1,296,613.05 | 3,167,104.52 | 40.146044 | -104.902264 |
| 5,413.0 | 12.00 | 246.90 | 5,293.9 | -363.7 | -1,024.3 | 1,296,604.69 | 3,167,086.00 | 40.146021 | -104.902330 |
| 5,507.0 | 11.80 | 247.80 | 5,385.9 | -371.2 | -1,042.2 | 1,296,597.10 | 3,167,068.17 | 40.146001 | -104.902394 |
| 5,602.0 | 12.40 | 249.30 | 5,478.8 | -378.5 | -1,060.8 | 1,296,589.70 | 3,167,049.68 | 40.145981 | -104.902460 |
| 5,696.0 | 12.30 | 250.50 | 5,570.6 | -385.4 | -1,079.6 | 1,296,582.66 | 3,167,030.85 | 40.145962 | -104.902528 |
| 5,791.0 | 11.90 | 252.20 | 5,663.5 | -391.8 | -1,098.5 | 1,296,576.16 | 3,167,012.03 | 40.145945 | -104.902595 |
| 5,885.0 | 12.40 | 253.30 | 5,755.4 | -397.6 | -1,117.4 | 1,296,570.17 | 3,166,993.18 | 40.145928 | -104.902663 |
| 5,981.0 | 11.70 | 256.20 | 5,849.3 | -402.9 | -1,136.7 | 1,296,564.76 | 3,166,973.89 | 40.145914 | -104.902732 |
| 6,075.0 | 12.10 | 253.70 | 5,941.3 | -408.0 | -1,155.4 | 1,296,559.59 | 3,166,955.21 | 40.145900 | -104.902799 |
| 6,170.0 | 12.00 | 250.50 | 6,034.2 | -414.0 | -1,174.3 | 1,296,553.37 | 3,166,936.38 | 40.145883 | -104.902867 |

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Sprague 3AA-9H-N267 |
| Project: | DJ Wattenberg | TVD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | Database: | USA EDM 5000 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 |
| 6,264.0 | 12.10 | 247.60 | 6,126.1 | -421.1 | -1,192.6 | 1,296,546.23 | 3,166,918.11 | 40.145864 | -104.902932 |
| 6,359.0 | 13.30 | 250.10 | 6,218.8 | -428.6 | -1,212.1 | 1,296,538.59 | 3,166,898.68 | 40.145843 | -104.903002 |
| 6,453.0 | 13.80 | 248.70 | 6,310.2 | -436.3 | -1,232.7 | 1,296,530.69 | 3,166,878.12 | 40.145822 | -104.903075 |
| 6,548.0 | 14.30 | 248.00 | 6,402.3 | -444.8 | -1,254.1 | 1,296,522.04 | 3,166,856.75 | 40.145799 | -104.903152 |
| 6,595.0 | 14.60 | 255.50 | 6,447.9 | -448.5 | -1,265.3 | 1,296,518.30 | 3,166,845.65 | 40.145789 | -104.903192 |
| 6,642.0 | 14.60 | 264.40 | 6,493.3 | -450.6 | -1,276.9 | 1,296,516.16 | 3,166,834.04 | 40.145783 | -104.903234 |
| 6,689.0 | 14.60 | 272.30 | 6,538.8 | -450.9 | -1,288.7 | 1,296,515.74 | 3,166,822.22 | 40.145782 | -104.903276 |
| 6,737.0 | 14.40 | 282.20 | 6,585.3 | -449.4 | -1,300.6 | 1,296,517.17 | 3,166,810.33 | 40.145786 | -104.903318 |
| 6,784.0 | 14.50 | 292.30 | 6,630.8 | -445.9 | -1,311.7 | 1,296,520.56 | 3,166,799.15 | 40.145796 | -104.903358 |
| 6,831.0 | 14.70 | 301.50 | 6,676.3 | -440.6 | -1,322.3 | 1,296,525.84 | 3,166,788.59 | 40.145811 | -104.903396 |
| 6,878.0 | 15.10 | 309.30 | 6,721.7 | -433.6 | -1,332.1 | 1,296,532.76 | 3,166,778.72 | 40.145830 | -104.903431 |
| 6,926.0 | 16.10 | 315.50 | 6,768.0 | -424.9 | -1,341.6 | 1,296,541.41 | 3,166,769.15 | 40.145854 | -104.903465 |
| 6,973.0 | 17.90 | 321.40 | 6,812.9 | -414.6 | -1,350.7 | 1,296,551.64 | 3,166,760.01 | 40.145882 | -104.903497 |
| 7,020.0 | 19.70 | 324.00 | 6,857.4 | -402.5 | -1,359.8 | 1,296,563.63 | 3,166,750.76 | 40.145915 | -104.903530 |
| 7,067.0 | 21.80 | 328.40 | 6,901.4 | -388.7 | -1,369.1 | 1,296,577.41 | 3,166,741.44 | 40.145953 | -104.903563 |
| 7,115.0 | 23.40 | 331.20 | 6,945.7 | -372.7 | -1,378.3 | 1,296,593.30 | 3,166,732.07 | 40.145997 | -104.903596 |
| 7,162.0 | 25.70 | 332.80 | 6,988.4 | -355.5 | -1,387.5 | 1,296,610.48 | 3,166,722.80 | 40.146044 | -104.903629 |
| 7,209.0 | 28.10 | 334.30 | 7,030.3 | -336.5 | -1,397.0 | 1,296,629.46 | 3,166,713.21 | 40.146096 | -104.903663 |
| 7,256.0 | 30.50 | 337.70 | 7,071.3 | -315.4 | -1,406.3 | 1,296,650.40 | 3,166,703.74 | 40.146154 | -104.903696 |
| 7,303.0 | 33.40 | 339.80 | 7,111.2 | -292.3 | -1,415.3 | 1,296,673.52 | 3,166,694.58 | 40.146218 | -104.903729 |
| 7,350.0 | 35.60 | 342.10 | 7,149.9 | -267.1 | -1,423.9 | 1,296,698.63 | 3,166,685.74 | 40.146287 | -104.903760 |
| 7,398.0 | 38.80 | 343.60 | 7,188.2 | -239.4 | -1,432.5 | 1,296,726.30 | 3,166,677.01 | 40.146363 | -104.903790 |
| 7,445.0 | 41.60 | 343.90 | 7,224.1 | -210.2 | -1,441.0 | 1,296,755.36 | 3,166,668.33 | 40.146443 | -104.903820 |
| 7,492.0 | 45.30 | 344.90 | 7,258.2 | -179.1 | -1,449.7 | 1,296,786.43 | 3,166,659.44 | 40.146528 | -104.903852 |
| 7,539.0 | 48.10 | 345.70 | 7,290.4 | -146.0 | -1,458.3 | 1,296,819.46 | 3,166,650.54 | 40.146619 | -104.903883 |
| 7,587.0 | 51.40 | 346.20 | 7,321.4 | -110.5 | -1,467.2 | 1,296,854.93 | 3,166,641.41 | 40.146717 | -104.903914 |
| 7,634.0 | 54.70 | 346.80 | 7,349.7 | -74.0 | -1,476.0 | 1,296,891.39 | 3,166,632.40 | 40.146817 | -104.903946 |
| 7,682.0 | 57.20 | 347.80 | 7,376.5 | -35.2 | -1,484.7 | 1,296,930.12 | 3,166,623.40 | 40.146923 | -104.903977 |
| 7,729.0 | 60.00 | 349.40 | 7,401.0 | 4.1 | -1,492.6 | 1,296,969.39 | 3,166,615.21 | 40.147031 | -104.904005 |
| 7,776.0 | 63.10 | 350.20 | 7,423.4 | 44.8 | -1,500.0 | 1,297,010.00 | 3,166,607.62 | 40.147143 | -104.904032 |
| 7,823.0 | 66.00 | 351.50 | 7,443.6 | 86.7 | -1,506.7 | 1,297,051.85 | 3,166,600.60 | 40.147258 | -104.904056 |
| 7,870.0 | 68.60 | 353.30 | 7,461.8 | 129.7 | -1,512.4 | 1,297,094.79 | 3,166,594.58 | 40.147376 | -104.904076 |
| 7,917.0 | 71.90 | 355.30 | 7,477.6 | 173.7 | -1,516.8 | 1,297,138.76 | 3,166,589.90 | 40.147497 | -104.904092 |
| 7,965.0 | 75.10 | 356.80 | 7,491.3 | 219.6 | -1,520.0 | 1,297,184.65 | 3,166,586.42 | 40.147623 | -104.904103 |
| 8,012.0 | 77.60 | 358.30 | 7,502.4 | 265.2 | -1,521.9 | 1,297,230.26 | 3,166,584.16 | 40.147748 | -104.904110 |
| 8,059.0 | 79.30 | 359.30 | 7,511.8 | 311.2 | -1,522.9 | 1,297,276.29 | 3,166,582.89 | 40.147874 | -104.904114 |
| 8,111.0 | 82.40 | 0.60 | 7,520.0 | 362.6 | -1,522.9 | 1,297,327.62 | 3,166,582.50 | 40.148015 | -104.904114 |
| 8,169.0 | 84.70 | 1.70 | 7,526.5 | 420.2 | -1,521.8 | 1,297,385.24 | 3,166,583.26 | 40.148173 | -104.904110 |
| 8,263.0 | 87.50 | 1.00 | 7,532.9 | 513.9 | -1,519.6 | 1,297,479.00 | 3,166,584.83 | 40.148431 | -104.904102 |
| 8,358.0 | 90.40 | 1.80 | 7,534.7 | 608.9 | -1,517.2 | 1,297,573.96 | 3,166,586.51 | 40.148691 | -104.904093 |
| 8,452.0 | 90.20 | 1.90 | 7,534.2 | 702.8 | -1,514.2 | 1,297,667.93 | 3,166,588.91 | 40.148949 | -104.904083 |
| 8,546.0 | 89.80 | 1.40 | 7,534.2 | 796.8 | -1,511.5 | 1,297,761.90 | 3,166,590.98 | 40.149207 | -104.904073 |
| 8,641.0 | 91.20 | 1.30 | 7,533.4 | 891.8 | -1,509.3 | 1,297,856.88 | 3,166,592.57 | 40.149468 | -104.904065 |
| 8,735.0 | 89.70 | 359.50 | 7,532.6 | 985.8 | -1,508.6 | 1,297,950.87 | 3,166,592.59 | 40.149726 | -104.904063 |
| 8,830.0 | 90.60 | 1.80 | 7,532.4 | 1,080.7 | -1,507.5 | 1,298,045.86 | 3,166,593.02 | 40.149987 | -104.904059 |
| 8,924.0 | 90.20 | 2.60 | 7,531.7 | 1,174.7 | -1,503.9 | 1,298,139.81 | 3,166,596.00 | 40.150245 | -104.904046 |
| 9,019.0 | 90.40 | 1.20 | 7,531.2 | 1,269.6 | -1,500.8 | 1,298,234.78 | 3,166,598.50 | 40.150505 | -104.904035 |
| 9,113.0 | 89.80 | 0.70 | 7,531.1 | 1,363.6 | -1,499.2 | 1,298,328.77 | 3,166,599.42 | 40.150763 | -104.904029 |
| 9,207.0 | 90.10 | 358.30 | 7,531.1 | 1,457.6 | -1,500.0 | 1,298,422.75 | 3,166,597.97 | 40.151021 | -104.904032 |
| 9,301.0 | 90.10 | 359.00 | 7,531.0 | 1,551.6 | -1,502.2 | 1,298,516.71 | 3,166,595.11 | 40.151279 | -104.904040 |
| 9,396.0 | 90.10 | 0.20 | 7,530.8 | 1,646.6 | -1,502.9 | 1,298,611.70 | 3,166,593.81 | 40.151540 | -104.904042 |
| 9,490.0 | 89.60 | 0.00 | 7,531.1 | 1,740.6 | -1,502.7 | 1,298,705.70 | 3,166,593.33 | 40.151798 | -104.904042 |
| 9,584.0 | 91.30 | 0.20 | 7,530.3 | 1,834.5 | -1,502.6 | 1,298,799.69 | 3,166,592.86 | 40.152056 | -104.904041 |
| 9,679.0 | 91.80 | 0.00 | 7,527.7 | 1,929.5 | -1,502.4 | 1,298,894.65 | 3,166,592.38 | 40.152317 | -104.904041 |
| 9,773.0 | 90.20 | 359.80 | 7,526.1 | 2,023.5 | -1,502.6 | 1,298,988.63 | 3,166,591.58 | 40.152575 | -104.904041 |

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Sprague 3AA-9H-N267 |
| Project: | DJ Wattenberg | TVD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | Database: | USA EDM 5000 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 |
| 9,867.0 | 90.40 | 0.60 | 7,525.6 | 2,117.5 | -1,502.2 | 1,299,082.63 | 3,166,591.27 | 40.152833 | -104.904040 |
| 9,961.0 | 90.20 | 0.50 | 7,525.1 | 2,211.5 | -1,501.3 | 1,299,176.63 | 3,166,591.54 | 40.153091 | -104.904037 |
| 10,056.0 | 89.60 | 359.80 | 7,525.3 | 2,306.5 | -1,501.1 | 1,299,271.63 | 3,166,591.14 | 40.153352 | -104.904036 |
| 10,150.0 | 89.20 | 358.90 | 7,526.3 | 2,400.5 | -1,502.2 | 1,299,365.60 | 3,166,589.44 | 40.153610 | -104.904040 |
| 10,244.0 | 89.00 | 358.90 | 7,527.7 | 2,494.4 | -1,504.0 | 1,299,459.56 | 3,166,586.99 | 40.153868 | -104.904046 |
| 10,338.0 | 90.40 | 359.70 | 7,528.2 | 2,588.4 | -1,505.1 | 1,299,553.54 | 3,166,585.21 | 40.154126 | -104.904051 |
| 10,433.0 | 89.90 | 358.90 | 7,528.0 | 2,683.4 | -1,506.3 | 1,299,648.52 | 3,166,583.40 | 40.154386 | -104.904055 |
| 10,527.0 | 88.80 | 356.60 | 7,529.1 | 2,777.3 | -1,510.0 | 1,299,742.41 | 3,166,579.08 | 40.154644 | -104.904068 |
| 10,621.0 | 88.70 | 357.80 | 7,531.1 | 2,871.2 | -1,514.6 | 1,299,836.24 | 3,166,573.85 | 40.154902 | -104.904084 |
| 10,715.0 | 90.40 | 0.90 | 7,531.8 | 2,965.2 | -1,515.6 | 1,299,930.20 | 3,166,572.15 | 40.155160 | -104.904088 |
| 10,810.0 | 90.10 | 0.40 | 7,531.4 | 3,060.2 | -1,514.5 | 1,300,025.20 | 3,166,572.58 | 40.155420 | -104.904084 |
| 10,904.0 | 89.40 | 359.80 | 7,531.8 | 3,154.2 | -1,514.4 | 1,300,119.20 | 3,166,572.11 | 40.155679 | -104.904084 |
| 10,998.0 | 89.50 | 1.20 | 7,532.7 | 3,248.2 | -1,513.6 | 1,300,213.19 | 3,166,572.29 | 40.155937 | -104.904081 |
| 11,092.0 | 90.70 | 1.70 | 7,532.6 | 3,342.1 | -1,511.2 | 1,300,307.17 | 3,166,574.03 | 40.156194 | -104.904072 |
| 11,186.0 | 90.40 | 1.40 | 7,531.7 | 3,436.1 | -1,508.6 | 1,300,401.15 | 3,166,575.94 | 40.156452 | -104.904063 |
| 11,281.0 | 90.40 | 1.20 | 7,531.0 | 3,531.1 | -1,506.5 | 1,300,496.14 | 3,166,577.45 | 40.156713 | -104.904056 |
| 11,375.0 | 90.10 | 359.80 | 7,530.6 | 3,625.1 | -1,505.7 | 1,300,590.13 | 3,166,577.63 | 40.156971 | -104.904053 |
| 11,469.0 | 89.90 | 0.00 | 7,530.6 | 3,719.1 | -1,505.8 | 1,300,684.13 | 3,166,576.83 | 40.157229 | -104.904053 |
| 11,564.0 | 89.80 | 0.50 | 7,530.9 | 3,814.1 | -1,505.4 | 1,300,779.13 | 3,166,576.60 | 40.157490 | -104.904052 |
| 11,659.0 | 90.20 | 0.40 | 7,530.9 | 3,909.0 | -1,504.7 | 1,300,874.13 | 3,166,576.70 | 40.157751 | -104.904049 |
| 11,753.0 | 89.80 | 0.40 | 7,530.9 | 4,003.0 | -1,504.0 | 1,300,968.13 | 3,166,576.72 | 40.158009 | -104.904047 |
| 11,847.0 | 89.10 | 359.60 | 7,531.8 | 4,097.0 | -1,504.0 | 1,301,062.12 | 3,166,576.08 | 40.158267 | -104.904047 |
| 11,942.0 | 89.50 | 359.80 | 7,532.9 | 4,192.0 | -1,504.5 | 1,301,157.11 | 3,166,574.94 | 40.158528 | -104.904049 |
| 12,036.0 | 89.60 | 359.20 | 7,533.7 | 4,286.0 | -1,505.3 | 1,301,251.09 | 3,166,573.48 | 40.158786 | -104.904052 |
| 12,131.0 | 90.50 | 359.80 | 7,533.6 | 4,381.0 | -1,506.2 | 1,301,346.08 | 3,166,572.01 | 40.159046 | -104.904055 |
| 12,225.0 | 90.50 | 0.10 | 7,532.8 | 4,475.0 | -1,506.2 | 1,301,440.07 | 3,166,571.29 | 40.159304 | -104.904055 |
| 12,319.0 | 90.50 | 0.80 | 7,531.9 | 4,569.0 | -1,505.5 | 1,301,534.07 | 3,166,571.39 | 40.159562 | -104.904052 |
| 12,414.0 | 90.20 | 1.40 | 7,531.4 | 4,664.0 | -1,503.7 | 1,301,629.06 | 3,166,572.57 | 40.159823 | -104.904046 |
| 12,508.0 | 89.70 | 0.80 | 7,531.4 | 4,758.0 | -1,501.9 | 1,301,723.05 | 3,166,573.74 | 40.160081 | -104.904039 |
| 12,603.0 | 90.60 | 0.90 | 7,531.2 | 4,853.0 | -1,500.5 | 1,301,818.05 | 3,166,574.50 | 40.160342 | -104.904034 |
| 12,697.0 | 90.70 | 1.50 | 7,530.1 | 4,946.9 | -1,498.5 | 1,301,912.03 | 3,166,575.84 | 40.160600 | -104.904027 |
| 12,791.0 | 90.90 | 1.80 | 7,528.8 | 5,040.9 | -1,495.8 | 1,302,006.00 | 3,166,577.90 | 40.160858 | -104.904018 |
| 12,886.0 | 90.80 | 2.60 | 7,527.4 | 5,135.8 | -1,492.1 | 1,302,100.94 | 3,166,580.91 | 40.161118 | -104.904005 |
| 12,936.0 | 90.80 | 2.70 | 7,526.7 | 5,185.7 | -1,489.8 | 1,302,150.89 | 3,166,582.88 | 40.161255 | -104.903996 |
| Last CES Survey @ 12,936' MD | | | | | | | | | |
| 12,991.0 | 90.80 | 2.70 | 7,525.9 | 5,240.7 | -1,487.2 | 1,302,205.84 | 3,166,585.10 | 40.161406 | -104.903987 |
| PTB @ 12,991' 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 | | | | | | | | | |
| Interp @ 7519.0 (Sprague) | 0.00 | 0.00 | 7,519.1 | 164.8 | -1,503.6 | 1,297,130.02 | 3,166,603.17 | 40.147472 | -104.904045 |
| - survey misses target center by 44.3ft at 7919.5ft MD (7478.4 TVD, 176.0 N, -1517.0 E) | | | | | | | | | |
| - Point | | | | | | | | | |
| Sprague 3AA-9H-N267 I | 0.00 | 0.39 | 7,520.0 | 5,238.4 | -1,504.9 | 1,302,203.48 | 3,166,567.48 | 40.161400 | -104.904050 |
| - survey misses target center by 18.5ft at 12988.0ft MD (7526.0 TVD, 5237.7 N, -1487.4 E) | | | | | | | | | |
| - Point | | | | | | | | | |

Survey Report - Geographic

| | | | |
|------------------|----------------------------|-------------------------------------|-----------------------------|
| Company: | EnCana Oil & Gas (USA) Inc | Local Co-ordinate Reference: | Well Sprague 3AA-9H-N267 |
| Project: | DJ Wattenberg | TVD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Site: | S9-T2N-R67W (Sprague) | MD Reference: | 28.5' @ 5011.1ft (Patt 272) |
| Well: | Sprague 3AA-9H-N267 | North Reference: | True |
| Wellbore: | Hz | Survey Calculation Method: | Minimum Curvature |
| Design: | FINAL | Database: | USA EDM 5000 Multi Users DB |

| Survey Annotations | | | | |
|---------------------------|---------------------------|-------------------|---------------|------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 12,936.0 | 7,526.7 | 5,185.7 | -1,489.8 | Last CES Survey @ 12,936' MD |
| 12,991.0 | 7,525.9 | 5,240.7 | -1,487.2 | PTB @ 12,991' MD |

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