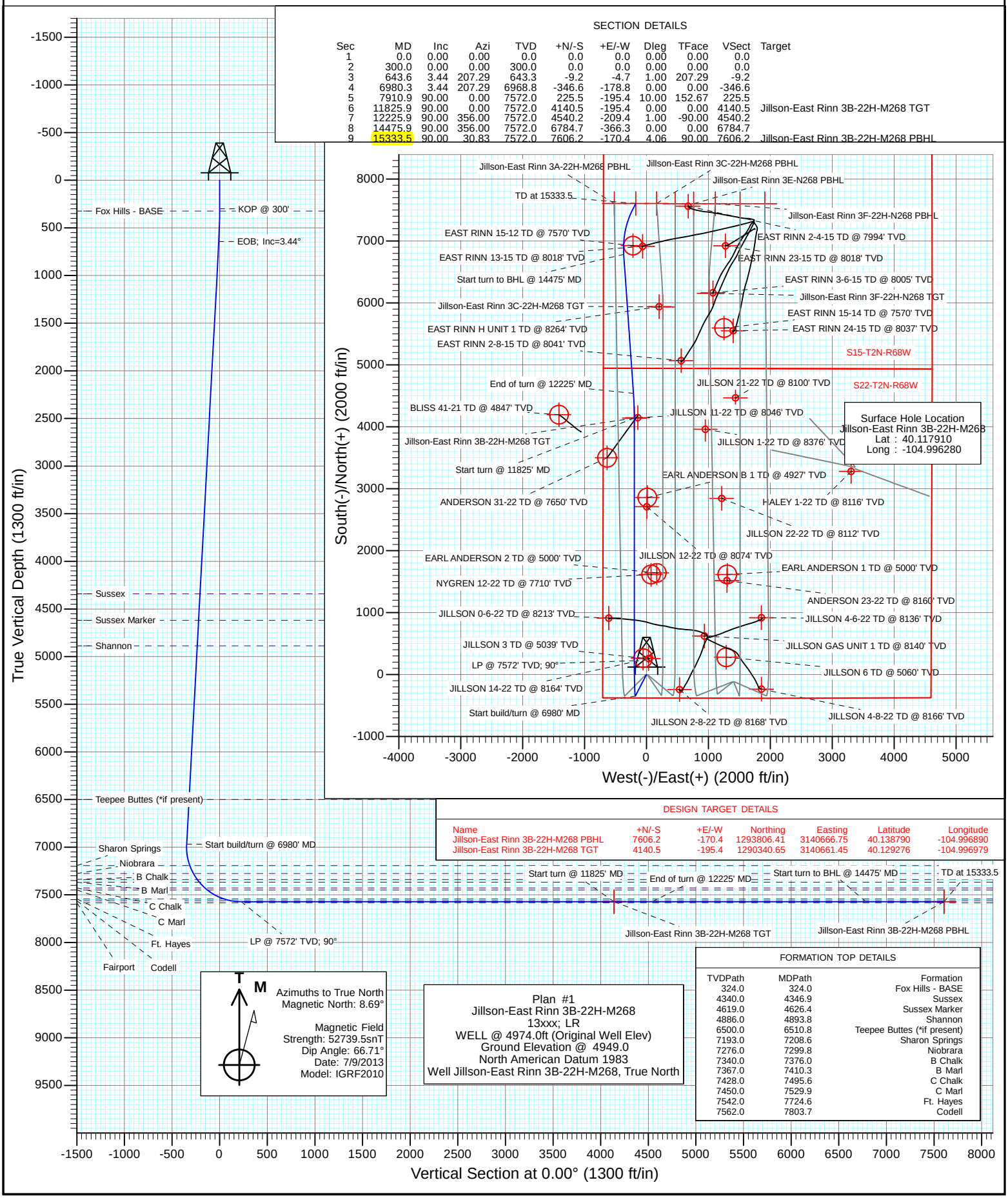
Project: DJ Wattenberg
Site: S22-T2N-R68W (Jillson-East Rinn)
Well: Jillson-East Rinn 3B-22H-M268
Wellbore: Hz
Design: Plan #1

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 643.6 | 3.44 | 207.29 | 643.3 | -9.2 | -4.7 | 1.00 | 207.29 | -9.2 | |
| 4 | 6980.3 | 3.44 | 207.29 | 6968.8 | -346.6 | -178.8 | 0.00 | 0.00 | -346.6 | |
| 5 | 7910.9 | 90.00 | 0.00 | 7572.0 | 225.5 | -195.4 | 10.00 | 152.67 | 225.5 | |
| 6 | 11825.9 | 90.00 | 0.00 | 7572.0 | 4140.5 | -195.4 | 0.00 | 0.00 | 4140.5 | Jillson-East Rinn 3B-22H-M268 TGT |
| 7 | 12225.9 | 90.00 | 356.00 | 7572.0 | 4540.2 | -209.4 | 1.00 | -90.00 | 4540.2 | |
| 8 | 14475.9 | 90.00 | 356.00 | 7572.0 | 6784.7 | -366.3 | 0.00 | 0.00 | 6784.7 | |
| 9 | 15333.5 | 90.00 | 30.83 | 7572.0 | 7606.2 | -170.4 | 4.06 | 90.00 | 7606.2 | Jillson-East Rinn 3B-22H-M268 PBHL |




DESIGN TARGET DETAILS

| Name | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|---|---|---|---|---|---|---|
| Jillson-East Rinn 3B-22H-M268 PBHL | 7606.2 | -170.4 | 1293806.41 | 3140666.75 | 40.138790 | -104.996890 |
| Jillson-East Rinn 3B-22H-M268 TGT | 4140.5 | -195.4 | 1290340.65 | 3140661.45 | 40.129276 | -104.996979 |

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---|---|---|
| 324.0 | 324.0 | Fox Hills - BASE |
| 4340.0 | 4346.9 | Sussex |
| 4619.0 | 4626.4 | Sussex Marker |
| 4886.0 | 4893.8 | Shannon |
| 6500.0 | 6510.8 | Teepee Buttes (*if present) |
| 7193.0 | 7208.6 | Sharon Springs |
| 7276.0 | 7299.8 | Niobrara |
| 7340.0 | 7376.0 | B Chalk |
| 7367.0 | 7410.3 | B Marl |
| 7428.0 | 7495.6 | C Chalk |
| 7450.0 | 7529.9 | C Marl |
| 7542.0 | 7724.6 | Ft. Hayes |
| 7562.0 | 7803.7 | Codell |

T M
Azimuths to True North
Magnetic North: 8.69°

Magnetic Field
Strength: 52739.5snT
Dip Angle: 66.71°
Date: 7/9/2013
Model: IGRF2010

Plan #1
Jillson-East Rinn 3B-22H-M268
13xxx; LR
WELL @ 4974.0ft (Original Well Elev)
Ground Elevation @ 4949.0
North American Datum 1983
Well Jillson-East Rinn 3B-22H-M268, True North

# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | USA EDM 5000 Multi Users DB | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Company:** | EnCana Oil & Gas (USA) Inc | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Project:** | DJ Wattenberg | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site:** | S22-T2N-R68W (Jillson-East Rinn) | **North Reference:** | True |
| **Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Hz | | |
| **Design:** | Plan #1 | | |

**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** S22-T2N-R68W (Jillson-East Rinn)

| | | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 1,289,542.88 ft | **Latitude:** | 40.127030 |
| **From:** | Lat/Long | **Easting:** | 3,144,231.14 ft | **Longitude:** | -104.984230 |
| **Position Uncertainty:** | 0.0 ft | **Slot Radius:** | 13.200 in | **Grid Convergence:** | 0.33 ° |

**Well** Jillson-East Rinn 3B-22H-M268

| | | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.0 ft | **Northing:** | 1,286,201.32 ft | **Latitude:** | 40.117910 |
| | **+E/-W** | 0.0 ft | **Easting:** | 3,140,880.37 ft | **Longitude:** | -104.996280 |
| **Position Uncertainty** | | 0.0 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 4,949.0 ft |

**Wellbore** Hz

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|---|---|---|---|---|---|
| | IGRF2010 | 7/9/2013 | 8.69 | 66.71 | 52,739 |

**Design** Plan #1

**Audit Notes:**

| | | | | | |
|---|---|---|---|---|---|
| **Version:** | | **Phase:** | PLAN | **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 |

**Plan Sections**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 643.6 | 3.44 | 207.29 | 643.3 | -9.2 | -4.7 | 1.00 | 1.00 | 0.00 | 207.29 | |
| 6,980.3 | 3.44 | 207.29 | 6,968.8 | -346.6 | -178.8 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,910.9 | 90.00 | 0.00 | 7,572.0 | 225.5 | -195.4 | 10.00 | 9.30 | 16.41 | 152.67 | |
| 11,825.9 | 90.00 | 0.00 | 7,572.0 | 4,140.5 | -195.4 | 0.00 | 0.00 | 0.00 | 0.00 | Jillson-East Rinn 3B-2 |
| 12,225.9 | 90.00 | 356.00 | 7,572.0 | 4,540.2 | -209.4 | 1.00 | 0.00 | -1.00 | -90.00 | |
| 14,475.9 | 90.00 | 356.00 | 7,572.0 | 6,784.7 | -366.3 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 15,333.5 | 90.00 | 30.83 | 7,572.0 | 7,606.2 | -170.4 | 4.06 | 0.00 | 4.06 | 90.00 | Jillson-East Rinn 3B-2 |

| | | | |
|---|---|---|---|
| **Database:** | USA EDM 5000 Multi Users DB | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Company:** | EnCana Oil & Gas (USA) Inc | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Project:** | DJ Wattenberg | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site:** | S22-T2N-R68W (Jillson-East Rinn) | **North Reference:** | True |
| **Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Hz | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | KOP @ 300' |
| 324.0 | 0.24 | 207.29 | 324.0 | 0.0 | 0.0 | 0.0 | 1.00 | 1.00 | Fox Hills - BASE |
| 400.0 | 1.00 | 207.29 | 400.0 | -0.8 | -0.4 | -0.8 | 1.00 | 1.00 | |
| 500.0 | 2.00 | 207.29 | 500.0 | -3.1 | -1.6 | -3.1 | 1.00 | 1.00 | |
| 600.0 | 3.00 | 207.29 | 599.9 | -7.0 | -3.6 | -7.0 | 1.00 | 1.00 | |
| 643.6 | 3.44 | 207.29 | 643.3 | -9.2 | -4.7 | -9.2 | 1.00 | 1.00 | EOB; Inc=3.44° |
| 700.0 | 3.44 | 207.29 | 699.7 | -12.2 | -6.3 | -12.2 | 0.00 | 0.00 | |
| 800.0 | 3.44 | 207.29 | 799.5 | -17.5 | -9.0 | -17.5 | 0.00 | 0.00 | |
| 900.0 | 3.44 | 207.29 | 899.3 | -22.8 | -11.8 | -22.8 | 0.00 | 0.00 | |
| 1,000.0 | 3.44 | 207.29 | 999.2 | -28.1 | -14.5 | -28.1 | 0.00 | 0.00 | |
| 1,100.0 | 3.44 | 207.29 | 1,099.0 | -33.5 | -17.3 | -33.5 | 0.00 | 0.00 | |
| 1,200.0 | 3.44 | 207.29 | 1,198.8 | -38.8 | -20.0 | -38.8 | 0.00 | 0.00 | |
| 1,300.0 | 3.44 | 207.29 | 1,298.6 | -44.1 | -22.8 | -44.1 | 0.00 | 0.00 | |
| 1,400.0 | 3.44 | 207.29 | 1,398.4 | -49.4 | -25.5 | -49.4 | 0.00 | 0.00 | |
| 1,500.0 | 3.44 | 207.29 | 1,498.3 | -54.8 | -28.2 | -54.8 | 0.00 | 0.00 | |
| 1,600.0 | 3.44 | 207.29 | 1,598.1 | -60.1 | -31.0 | -60.1 | 0.00 | 0.00 | |
| 1,700.0 | 3.44 | 207.29 | 1,697.9 | -65.4 | -33.7 | -65.4 | 0.00 | 0.00 | |
| 1,800.0 | 3.44 | 207.29 | 1,797.7 | -70.7 | -36.5 | -70.7 | 0.00 | 0.00 | |
| 1,900.0 | 3.44 | 207.29 | 1,897.5 | -76.1 | -39.2 | -76.1 | 0.00 | 0.00 | |
| 2,000.0 | 3.44 | 207.29 | 1,997.4 | -81.4 | -42.0 | -81.4 | 0.00 | 0.00 | |
| 2,100.0 | 3.44 | 207.29 | 2,097.2 | -86.7 | -44.7 | -86.7 | 0.00 | 0.00 | |
| 2,200.0 | 3.44 | 207.29 | 2,197.0 | -92.0 | -47.5 | -92.0 | 0.00 | 0.00 | |
| 2,300.0 | 3.44 | 207.29 | 2,296.8 | -97.4 | -50.2 | -97.4 | 0.00 | 0.00 | |
| 2,400.0 | 3.44 | 207.29 | 2,396.6 | -102.7 | -53.0 | -102.7 | 0.00 | 0.00 | |
| 2,500.0 | 3.44 | 207.29 | 2,496.5 | -108.0 | -55.7 | -108.0 | 0.00 | 0.00 | |
| 2,600.0 | 3.44 | 207.29 | 2,596.3 | -113.3 | -58.5 | -113.3 | 0.00 | 0.00 | |
| 2,700.0 | 3.44 | 207.29 | 2,696.1 | -118.7 | -61.2 | -118.7 | 0.00 | 0.00 | |
| 2,800.0 | 3.44 | 207.29 | 2,795.9 | -124.0 | -64.0 | -124.0 | 0.00 | 0.00 | |
| 2,900.0 | 3.44 | 207.29 | 2,895.7 | -129.3 | -66.7 | -129.3 | 0.00 | 0.00 | |
| 3,000.0 | 3.44 | 207.29 | 2,995.6 | -134.7 | -69.5 | -134.7 | 0.00 | 0.00 | |
| 3,100.0 | 3.44 | 207.29 | 3,095.4 | -140.0 | -72.2 | -140.0 | 0.00 | 0.00 | |
| 3,200.0 | 3.44 | 207.29 | 3,195.2 | -145.3 | -74.9 | -145.3 | 0.00 | 0.00 | |
| 3,300.0 | 3.44 | 207.29 | 3,295.0 | -150.6 | -77.7 | -150.6 | 0.00 | 0.00 | |
| 3,400.0 | 3.44 | 207.29 | 3,394.8 | -156.0 | -80.4 | -156.0 | 0.00 | 0.00 | |
| 3,500.0 | 3.44 | 207.29 | 3,494.7 | -161.3 | -83.2 | -161.3 | 0.00 | 0.00 | |
| 3,600.0 | 3.44 | 207.29 | 3,594.5 | -166.6 | -85.9 | -166.6 | 0.00 | 0.00 | |
| 3,700.0 | 3.44 | 207.29 | 3,694.3 | -171.9 | -88.7 | -171.9 | 0.00 | 0.00 | |
| 3,800.0 | 3.44 | 207.29 | 3,794.1 | -177.3 | -91.4 | -177.3 | 0.00 | 0.00 | |
| 3,900.0 | 3.44 | 207.29 | 3,893.9 | -182.6 | -94.2 | -182.6 | 0.00 | 0.00 | |
| 4,000.0 | 3.44 | 207.29 | 3,993.8 | -187.9 | -96.9 | -187.9 | 0.00 | 0.00 | |
| 4,100.0 | 3.44 | 207.29 | 4,093.6 | -193.2 | -99.7 | -193.2 | 0.00 | 0.00 | |
| 4,200.0 | 3.44 | 207.29 | 4,193.4 | -198.6 | -102.4 | -198.6 | 0.00 | 0.00 | |
| 4,300.0 | 3.44 | 207.29 | 4,293.2 | -203.9 | -105.2 | -203.9 | 0.00 | 0.00 | |
| 4,346.9 | 3.44 | 207.29 | 4,340.0 | -206.4 | -106.5 | -206.4 | 0.00 | 0.00 | Sussex |
| 4,400.0 | 3.44 | 207.29 | 4,393.0 | -209.2 | -107.9 | -209.2 | 0.00 | 0.00 | |
| 4,500.0 | 3.44 | 207.29 | 4,492.9 | -214.5 | -110.7 | -214.5 | 0.00 | 0.00 | |
| 4,600.0 | 3.44 | 207.29 | 4,592.7 | -219.9 | -113.4 | -219.9 | 0.00 | 0.00 | |
| 4,626.4 | 3.44 | 207.29 | 4,619.0 | -221.3 | -114.1 | -221.3 | 0.00 | 0.00 | Sussex Marker |
| 4,700.0 | 3.44 | 207.29 | 4,692.5 | -225.2 | -116.2 | -225.2 | 0.00 | 0.00 | |

| | | | |
|---|---|---|---|
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| **Company:** | EnCana Oil & Gas (USA) Inc | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Project:** | DJ Wattenberg | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site:** | S22-T2N-R68W (Jillson-East Rinn) | **North Reference:** | True |
| **Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Hz | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
|---|---|---|---|---|---|---|---|---|---|
| 4,800.0 | 3.44 | 207.29 | 4,792.3 | -230.5 | -118.9 | -230.5 | 0.00 | 0.00 | |
| 4,893.8 | 3.44 | 207.29 | 4,886.0 | -235.5 | -121.5 | -235.5 | 0.00 | 0.00 | Shannon |
| 4,900.0 | 3.44 | 207.29 | 4,892.1 | -235.8 | -121.6 | -235.8 | 0.00 | 0.00 | |
| 5,000.0 | 3.44 | 207.29 | 4,992.0 | -241.2 | -124.4 | -241.2 | 0.00 | 0.00 | |
| 5,100.0 | 3.44 | 207.29 | 5,091.8 | -246.5 | -127.1 | -246.5 | 0.00 | 0.00 | |
| 5,200.0 | 3.44 | 207.29 | 5,191.6 | -251.8 | -129.9 | -251.8 | 0.00 | 0.00 | |
| 5,300.0 | 3.44 | 207.29 | 5,291.4 | -257.1 | -132.6 | -257.1 | 0.00 | 0.00 | |
| 5,400.0 | 3.44 | 207.29 | 5,391.2 | -262.5 | -135.4 | -262.5 | 0.00 | 0.00 | |
| 5,500.0 | 3.44 | 207.29 | 5,491.1 | -267.8 | -138.1 | -267.8 | 0.00 | 0.00 | |
| 5,600.0 | 3.44 | 207.29 | 5,590.9 | -273.1 | -140.9 | -273.1 | 0.00 | 0.00 | |
| 5,700.0 | 3.44 | 207.29 | 5,690.7 | -278.4 | -143.6 | -278.4 | 0.00 | 0.00 | |
| 5,800.0 | 3.44 | 207.29 | 5,790.5 | -283.8 | -146.4 | -283.8 | 0.00 | 0.00 | |
| 5,900.0 | 3.44 | 207.29 | 5,890.3 | -289.1 | -149.1 | -289.1 | 0.00 | 0.00 | |
| 6,000.0 | 3.44 | 207.29 | 5,990.2 | -294.4 | -151.9 | -294.4 | 0.00 | 0.00 | |
| 6,100.0 | 3.44 | 207.29 | 6,090.0 | -299.8 | -154.6 | -299.8 | 0.00 | 0.00 | |
| 6,200.0 | 3.44 | 207.29 | 6,189.8 | -305.1 | -157.4 | -305.1 | 0.00 | 0.00 | |
| 6,300.0 | 3.44 | 207.29 | 6,289.6 | -310.4 | -160.1 | -310.4 | 0.00 | 0.00 | |
| 6,400.0 | 3.44 | 207.29 | 6,389.4 | -315.7 | -162.9 | -315.7 | 0.00 | 0.00 | |
| 6,500.0 | 3.44 | 207.29 | 6,489.3 | -321.1 | -165.6 | -321.1 | 0.00 | 0.00 | |
| 6,510.8 | 3.44 | 207.29 | 6,500.0 | -321.6 | -165.9 | -321.6 | 0.00 | 0.00 | Teepee Buttes (*if present) |
| 6,600.0 | 3.44 | 207.29 | 6,589.1 | -326.4 | -168.3 | -326.4 | 0.00 | 0.00 | |
| 6,700.0 | 3.44 | 207.29 | 6,688.9 | -331.7 | -171.1 | -331.7 | 0.00 | 0.00 | |
| 6,800.0 | 3.44 | 207.29 | 6,788.7 | -337.0 | -173.8 | -337.0 | 0.00 | 0.00 | |
| 6,900.0 | 3.44 | 207.29 | 6,888.6 | -342.4 | -176.6 | -342.4 | 0.00 | 0.00 | |
| 6,980.3 | 3.44 | 207.29 | 6,968.8 | -346.6 | -178.8 | -346.6 | 0.00 | 0.00 | Start build/turn @ 6980' MD |
| 7,000.0 | 1.92 | 235.38 | 6,988.4 | -347.3 | -179.3 | -347.3 | 10.00 | -7.74 | |
| 7,100.0 | 9.05 | 350.05 | 7,088.0 | -340.5 | -182.1 | -340.5 | 10.00 | 7.13 | |
| 7,200.0 | 18.98 | 355.41 | 7,184.9 | -316.5 | -184.7 | -316.5 | 10.00 | 9.93 | |
| 7,208.6 | 19.83 | 355.62 | 7,193.0 | -313.7 | -185.0 | -313.7 | 10.00 | 9.97 | Sharon Springs |
| 7,299.8 | 28.93 | 357.15 | 7,276.0 | -276.1 | -187.3 | -276.1 | 10.00 | 9.98 | Niobrara |
| 7,300.0 | 28.95 | 357.15 | 7,276.2 | -276.0 | -187.3 | -276.0 | 10.00 | 9.98 | |
| 7,376.0 | 36.54 | 357.87 | 7,340.0 | -235.0 | -189.0 | -235.0 | 10.00 | 9.99 | B Chalk |
| 7,400.0 | 38.94 | 358.05 | 7,359.0 | -220.3 | -189.5 | -220.3 | 10.00 | 9.99 | |
| 7,410.3 | 39.97 | 358.12 | 7,367.0 | -213.7 | -189.8 | -213.7 | 10.00 | 9.99 | B Marl |
| 7,495.6 | 48.49 | 358.60 | 7,428.0 | -154.4 | -191.4 | -154.4 | 10.00 | 9.99 | C Chalk |
| 7,500.0 | 48.93 | 358.63 | 7,430.9 | -151.1 | -191.5 | -151.1 | 10.00 | 9.99 | |
| 7,529.9 | 51.92 | 358.76 | 7,450.0 | -128.0 | -192.0 | -128.0 | 10.00 | 9.99 | C Marl |
| 7,600.0 | 58.93 | 359.05 | 7,489.7 | -70.3 | -193.1 | -70.3 | 10.00 | 9.99 | |
| 7,700.0 | 68.92 | 359.39 | 7,533.6 | 19.4 | -194.3 | 19.4 | 10.00 | 10.00 | |
| 7,724.6 | 71.38 | 359.47 | 7,542.0 | 42.5 | -194.6 | 42.5 | 10.00 | 10.00 | Ft. Hayes |
| 7,800.0 | 78.92 | 359.69 | 7,561.3 | 115.3 | -195.1 | 115.3 | 10.00 | 10.00 | |
| 7,803.7 | 79.28 | 359.70 | 7,562.0 | 118.9 | -195.1 | 118.9 | 10.00 | 10.00 | Codell |
| 7,900.0 | 88.91 | 359.97 | 7,571.9 | 214.6 | -195.4 | 214.6 | 10.00 | 10.00 | |
| 7,910.9 | 90.00 | 0.00 | 7,572.0 | 225.5 | -195.4 | 225.5 | 10.00 | 10.00 | LP @ 7572' TVD; 90° |
| 8,000.0 | 90.00 | 0.00 | 7,572.0 | 314.6 | -195.4 | 314.6 | 0.00 | 0.00 | |
| 8,100.0 | 90.00 | 0.00 | 7,572.0 | 414.6 | -195.4 | 414.6 | 0.00 | 0.00 | |
| 8,200.0 | 90.00 | 0.00 | 7,572.0 | 514.6 | -195.4 | 514.6 | 0.00 | 0.00 | |
| 8,300.0 | 90.00 | 0.00 | 7,572.0 | 614.6 | -195.4 | 614.6 | 0.00 | 0.00 | |
| 8,400.0 | 90.00 | 0.00 | 7,572.0 | 714.6 | -195.4 | 714.6 | 0.00 | 0.00 | |
| 8,500.0 | 90.00 | 0.00 | 7,572.0 | 814.6 | -195.4 | 814.6 | 0.00 | 0.00 | |
| 8,600.0 | 90.00 | 0.00 | 7,572.0 | 914.6 | -195.4 | 914.6 | 0.00 | 0.00 | |
| 8,700.0 | 90.00 | 0.00 | 7,572.0 | 1,014.6 | -195.4 | 1,014.6 | 0.00 | 0.00 | |

| | | | |
|---|---|---|---|
| **Database:** | USA EDM 5000 Multi Users DB | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Company:** | EnCana Oil & Gas (USA) Inc | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Project:** | DJ Wattenberg | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site:** | S22-T2N-R68W (Jillson-East Rinn) | **North Reference:** | True |
| **Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Hz | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
|---|---|---|---|---|---|---|---|---|---|
| 8,800.0 | 90.00 | 0.00 | 7,572.0 | 1,114.6 | -195.4 | 1,114.6 | 0.00 | 0.00 | |
| 8,900.0 | 90.00 | 0.00 | 7,572.0 | 1,214.6 | -195.4 | 1,214.6 | 0.00 | 0.00 | |
| 9,000.0 | 90.00 | 0.00 | 7,572.0 | 1,314.6 | -195.4 | 1,314.6 | 0.00 | 0.00 | |
| 9,100.0 | 90.00 | 0.00 | 7,572.0 | 1,414.6 | -195.4 | 1,414.6 | 0.00 | 0.00 | |
| 9,200.0 | 90.00 | 0.00 | 7,572.0 | 1,514.6 | -195.4 | 1,514.6 | 0.00 | 0.00 | |
| 9,300.0 | 90.00 | 0.00 | 7,572.0 | 1,614.6 | -195.4 | 1,614.6 | 0.00 | 0.00 | |
| 9,400.0 | 90.00 | 0.00 | 7,572.0 | 1,714.6 | -195.4 | 1,714.6 | 0.00 | 0.00 | |
| 9,500.0 | 90.00 | 0.00 | 7,572.0 | 1,814.6 | -195.4 | 1,814.6 | 0.00 | 0.00 | |
| 9,600.0 | 90.00 | 0.00 | 7,572.0 | 1,914.6 | -195.4 | 1,914.6 | 0.00 | 0.00 | |
| 9,700.0 | 90.00 | 0.00 | 7,572.0 | 2,014.6 | -195.4 | 2,014.6 | 0.00 | 0.00 | |
| 9,800.0 | 90.00 | 0.00 | 7,572.0 | 2,114.6 | -195.4 | 2,114.6 | 0.00 | 0.00 | |
| 9,900.0 | 90.00 | 0.00 | 7,572.0 | 2,214.6 | -195.4 | 2,214.6 | 0.00 | 0.00 | |
| 10,000.0 | 90.00 | 0.00 | 7,572.0 | 2,314.6 | -195.4 | 2,314.6 | 0.00 | 0.00 | |
| 10,100.0 | 90.00 | 0.00 | 7,572.0 | 2,414.6 | -195.4 | 2,414.6 | 0.00 | 0.00 | |
| 10,200.0 | 90.00 | 0.00 | 7,572.0 | 2,514.6 | -195.4 | 2,514.6 | 0.00 | 0.00 | |
| 10,300.0 | 90.00 | 0.00 | 7,572.0 | 2,614.6 | -195.4 | 2,614.6 | 0.00 | 0.00 | |
| 10,400.0 | 90.00 | 0.00 | 7,572.0 | 2,714.6 | -195.4 | 2,714.6 | 0.00 | 0.00 | |
| 10,500.0 | 90.00 | 0.00 | 7,572.0 | 2,814.6 | -195.4 | 2,814.6 | 0.00 | 0.00 | |
| 10,600.0 | 90.00 | 0.00 | 7,572.0 | 2,914.6 | -195.4 | 2,914.6 | 0.00 | 0.00 | |
| 10,700.0 | 90.00 | 0.00 | 7,572.0 | 3,014.6 | -195.4 | 3,014.6 | 0.00 | 0.00 | |
| 10,800.0 | 90.00 | 0.00 | 7,572.0 | 3,114.6 | -195.4 | 3,114.6 | 0.00 | 0.00 | |
| 10,900.0 | 90.00 | 0.00 | 7,572.0 | 3,214.6 | -195.4 | 3,214.6 | 0.00 | 0.00 | |
| 11,000.0 | 90.00 | 0.00 | 7,572.0 | 3,314.6 | -195.4 | 3,314.6 | 0.00 | 0.00 | |
| 11,100.0 | 90.00 | 0.00 | 7,572.0 | 3,414.6 | -195.4 | 3,414.6 | 0.00 | 0.00 | |
| 11,200.0 | 90.00 | 0.00 | 7,572.0 | 3,514.6 | -195.4 | 3,514.6 | 0.00 | 0.00 | |
| 11,300.0 | 90.00 | 0.00 | 7,572.0 | 3,614.6 | -195.4 | 3,614.6 | 0.00 | 0.00 | |
| 11,400.0 | 90.00 | 0.00 | 7,572.0 | 3,714.6 | -195.4 | 3,714.6 | 0.00 | 0.00 | |
| 11,500.0 | 90.00 | 0.00 | 7,572.0 | 3,814.6 | -195.4 | 3,814.6 | 0.00 | 0.00 | |
| 11,600.0 | 90.00 | 0.00 | 7,572.0 | 3,914.6 | -195.4 | 3,914.6 | 0.00 | 0.00 | |
| 11,700.0 | 90.00 | 0.00 | 7,572.0 | 4,014.6 | -195.4 | 4,014.6 | 0.00 | 0.00 | |
| 11,800.0 | 90.00 | 0.00 | 7,572.0 | 4,114.6 | -195.4 | 4,114.6 | 0.00 | 0.00 | |
| 11,825.9 | 90.00 | 0.00 | 7,572.0 | 4,140.5 | -195.4 | 4,140.5 | 0.00 | 0.00 | Start turn @ 11825' MD - Jillson-East Rinn 3B-2 |
| 11,900.0 | 90.00 | 359.26 | 7,572.0 | 4,214.6 | -195.9 | 4,214.6 | 1.00 | 0.00 | |
| 12,000.0 | 90.00 | 358.26 | 7,572.0 | 4,314.6 | -198.0 | 4,314.6 | 1.00 | 0.00 | |
| 12,100.0 | 90.00 | 357.26 | 7,572.0 | 4,414.5 | -202.0 | 4,414.5 | 1.00 | 0.00 | |
| 12,200.0 | 90.00 | 356.26 | 7,572.0 | 4,514.4 | -207.6 | 4,514.4 | 1.00 | 0.00 | |
| 12,225.9 | 90.00 | 356.00 | 7,572.0 | 4,540.2 | -209.4 | 4,540.2 | 1.00 | 0.00 | End of turn @ 12225' MD |
| 12,300.0 | 90.00 | 356.00 | 7,572.0 | 4,614.1 | -214.5 | 4,614.1 | 0.00 | 0.00 | |
| 12,400.0 | 90.00 | 356.00 | 7,572.0 | 4,713.9 | -221.5 | 4,713.9 | 0.00 | 0.00 | |
| 12,500.0 | 90.00 | 356.00 | 7,572.0 | 4,813.6 | -228.5 | 4,813.6 | 0.00 | 0.00 | |
| 12,600.0 | 90.00 | 356.00 | 7,572.0 | 4,913.4 | -235.5 | 4,913.4 | 0.00 | 0.00 | |
| 12,700.0 | 90.00 | 356.00 | 7,572.0 | 5,013.1 | -242.4 | 5,013.1 | 0.00 | 0.00 | |
| 12,800.0 | 90.00 | 356.00 | 7,572.0 | 5,112.9 | -249.4 | 5,112.9 | 0.00 | 0.00 | |
| 12,900.0 | 90.00 | 356.00 | 7,572.0 | 5,212.7 | -256.4 | 5,212.7 | 0.00 | 0.00 | |
| 13,000.0 | 90.00 | 356.00 | 7,572.0 | 5,312.4 | -263.4 | 5,312.4 | 0.00 | 0.00 | |
| 13,100.0 | 90.00 | 356.00 | 7,572.0 | 5,412.2 | -270.3 | 5,412.2 | 0.00 | 0.00 | |
| 13,200.0 | 90.00 | 356.00 | 7,572.0 | 5,511.9 | -277.3 | 5,511.9 | 0.00 | 0.00 | |
| 13,300.0 | 90.00 | 356.00 | 7,572.0 | 5,611.7 | -284.3 | 5,611.7 | 0.00 | 0.00 | |
| 13,400.0 | 90.00 | 356.00 | 7,572.0 | 5,711.4 | -291.3 | 5,711.4 | 0.00 | 0.00 | |
| 13,500.0 | 90.00 | 356.00 | 7,572.0 | 5,811.2 | -298.2 | 5,811.2 | 0.00 | 0.00 | |
| 13,600.0 | 90.00 | 356.00 | 7,572.0 | 5,911.0 | -305.2 | 5,911.0 | 0.00 | 0.00 | |
| 13,700.0 | 90.00 | 356.00 | 7,572.0 | 6,010.7 | -312.2 | 6,010.7 | 0.00 | 0.00 | |

| | | | |
|---|---|---|---|
| **Database:** | USA EDM 5000 Multi Users DB | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Company:** | EnCana Oil & Gas (USA) Inc | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Project:** | DJ Wattenberg | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site:** | S22-T2N-R68W (Jillson-East Rinn) | **North Reference:** | True |
| **Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Hz | | |
| **Design:** | Plan #1 | | |

**Planned Survey**

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Comments / Formations |
|---|---|---|---|---|---|---|---|---|---|
| 13,800.0 | 90.00 | 356.00 | 7,572.0 | 6,110.5 | -319.2 | 6,110.5 | 0.00 | 0.00 | |
| 13,900.0 | 90.00 | 356.00 | 7,572.0 | 6,210.2 | -326.1 | 6,210.2 | 0.00 | 0.00 | |
| 14,000.0 | 90.00 | 356.00 | 7,572.0 | 6,310.0 | -333.1 | 6,310.0 | 0.00 | 0.00 | |
| 14,100.0 | 90.00 | 356.00 | 7,572.0 | 6,409.7 | -340.1 | 6,409.7 | 0.00 | 0.00 | |
| 14,200.0 | 90.00 | 356.00 | 7,572.0 | 6,509.5 | -347.1 | 6,509.5 | 0.00 | 0.00 | |
| 14,300.0 | 90.00 | 356.00 | 7,572.0 | 6,609.3 | -354.0 | 6,609.3 | 0.00 | 0.00 | |
| 14,400.0 | 90.00 | 356.00 | 7,572.0 | 6,709.0 | -361.0 | 6,709.0 | 0.00 | 0.00 | |
| 14,475.9 | 90.00 | 356.00 | 7,572.0 | 6,784.7 | -366.3 | 6,784.7 | 0.00 | 0.00 | Start turn to BHL @ 14475' MD |
| 14,500.0 | 90.00 | 356.98 | 7,572.0 | 6,808.8 | -367.8 | 6,808.8 | 4.06 | 0.00 | |
| 14,600.0 | 90.00 | 1.04 | 7,572.0 | 6,908.7 | -369.5 | 6,908.7 | 4.06 | 0.00 | |
| 14,700.0 | 90.00 | 5.10 | 7,572.0 | 7,008.6 | -364.2 | 7,008.6 | 4.06 | 0.00 | |
| 14,800.0 | 90.00 | 9.16 | 7,572.0 | 7,107.8 | -351.7 | 7,107.8 | 4.06 | 0.00 | |
| 14,900.0 | 90.00 | 13.22 | 7,572.0 | 7,205.9 | -332.3 | 7,205.9 | 4.06 | 0.00 | |
| 15,000.0 | 90.00 | 17.28 | 7,572.0 | 7,302.3 | -306.0 | 7,302.3 | 4.06 | 0.00 | |
| 15,100.0 | 90.00 | 21.34 | 7,572.0 | 7,396.7 | -273.0 | 7,396.7 | 4.06 | 0.00 | |
| 15,200.0 | 90.00 | 25.40 | 7,572.0 | 7,488.4 | -233.3 | 7,488.4 | 4.06 | 0.00 | |
| 15,300.0 | 90.00 | 29.46 | 7,572.0 | 7,577.2 | -187.3 | 7,577.2 | 4.06 | 0.00 | |
| 15,333.5 | 90.00 | 30.83 | 7,572.0 | 7,606.2 | -170.4 | 7,606.2 | 4.06 | 0.00 | TD at 15333.5 - Jillson-East Rinn 3B-22H-M268 |

**Targets**

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
|---|---|---|---|---|---|---|---|---|---|
| Jillson-East Rinn 3B-22H<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 7,572.0 | 7,606.2 | -170.4 | 1,293,806.41 | 3,140,666.75 | 40.138790 | -104.996890 |
| Jillson-East Rinn 3B-22H<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 7,572.0 | 4,140.5 | -195.4 | 1,290,340.65 | 3,140,661.45 | 40.129276 | -104.996979 |

**Formations**

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 324.0 | 324.0 | Fox Hills - BASE | | | |
| 4,346.9 | 4,340.0 | Sussex | | | |
| 4,626.4 | 4,619.0 | Sussex Marker | | | |
| 4,893.8 | 4,886.0 | Shannon | | | |
| 6,510.8 | 6,500.0 | Teepee Buttes (*if present) | | | |
| 7,208.6 | 7,193.0 | Sharon Springs | | | |
| 7,299.8 | 7,276.0 | Niobrara | | | |
| 7,376.0 | 7,340.0 | B Chalk | | | |
| 7,410.3 | 7,367.0 | B Marl | | | |
| 7,495.6 | 7,428.0 | C Chalk | | | |
| 7,529.9 | 7,450.0 | C Marl | | | |
| 7,724.6 | 7,542.0 | Ft. Hayes | | | |
| 7,803.7 | 7,562.0 | Codell | | | |

| | | | |
|---|---|---|---|
| **Database:** | USA EDM 5000 Multi Users DB | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Company:** | EnCana Oil & Gas (USA) Inc | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Project:** | DJ Wattenberg | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site:** | S22-T2N-R68W (Jillson-East Rinn) | **North Reference:** | True |
| **Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | Hz | | |
| **Design:** | Plan #1 | | |

**Plan Annotations**

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 300.0 | 300.0 | 0.0 | 0.0 | KOP @ 300' |
| 643.6 | 643.3 | -9.2 | -4.7 | EOB; Inc=3.44° |
| 6,980.3 | 6,968.8 | -346.6 | -178.8 | Start build/turn @ 6980' MD |
| 7,910.9 | 7,572.0 | 225.5 | -195.4 | LP @ 7572' TVD; 90° |
| 11,825.9 | 7,572.0 | 4,140.5 | -195.4 | Start turn @ 11825' MD |
| 12,225.9 | 7,572.0 | 4,540.2 | -209.4 | End of turn @ 12225' MD |
| 14,475.9 | 7,572.0 | 6,784.7 | -366.3 | Start turn to BHL @ 14475' MD |
| 15,333.5 | 7,572.0 | 7,606.2 | -170.4 | TD at 15333.5 |

# EnCana Oil & Gas (USA) Inc

**DJ Wattenberg**
**S22-T2N-R68W (Jillson-East Rinn)**
**Jillson-East Rinn 3B-22H-M268**
**Hz**
**Plan #1**

# Anticollision Report

**10 July, 2013**

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

| | |
|---|---|
| **Reference** | Plan #1 |

| | | | |
|---|---|---|---|
| **Filter type:** | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| **Interpolation Method:** | MD Interval 100.0ft | **Error Model:** | Systematic Ellipse |
| **Depth Range:** | Unlimited | **Scan Method:** | Closest Approach 3D |
| **Results Limited by:** | Maximum center-center distance of 500.0ft | **Error Surface:** | Elliptical Conic |
| **Warning Levels Evaluated at:** | 2.00 **Sigma** | | |

**Survey Tool Program** **Date** 7/10/2013

| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.0 | 15,333.5 | Plan #1 (Hz) | Geolink MWD | Geolink MWD |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Summary**

| Site Name<br>Offset Well - Wellbore - Design | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
|---|---|---|---|---|---|---|
| S22-T2N-R68W (Jillson-East Rinn) | | | | | | |
| ANDERSON 23-22 (EXISTING) - ENCANA WELL - NO S | | | | | | Out of range |
| ANDERSON 31-22 (EXISTING) - KERR-MCGEE WELL | 11,187.2 | 7,590.6 | 440.0 | 357.8 | 5.352 | CC |
| ANDERSON 31-22 (EXISTING) - KERR-MCGEE WELL | 11,200.0 | 7,590.6 | 440.2 | 357.8 | 5.340 | ES, SF |
| BLISS 41-21 (EXISTING) - KPK WELL - SURVEYS | | | | | | Out of range |
| EARL ANDERSON 1 (EXISTING) - KPK WELL - NO SUR | | | | | | Out of range |
| EARL ANDERSON 2 (EXISTING) - KPK WELL - NO SUR | | | | | | Out of range |
| EARL ANDERSON B 1 (EXISTING) - KPK WELL - NO S | | | | | | Out of range |
| EAST RINN 13-15 (EXISTING) - ENCANA WELL - SURV | 14,614.5 | 7,869.9 | 307.8 | 168.1 | 2.204 | CC, ES, SF |
| EAST RINN 15-12 (EXISTING) AL - VESSELS WELL - N | 14,623.7 | 7,473.0 | 152.1 | 15.3 | 1.112 | Level 2, CC, ES, SF |
| EAST RINN 15-14 (EXISTING) AL - VESSELS WELL - N | | | | | | Out of range |
| EAST RINN 23-15 (EXISTING) - ENCANA WELL - SURV | | | | | | Out of range |
| EAST RINN 24-15 (EXISTING) - ENCANA WELL - SURV | | | | | | Out of range |
| EAST RINN 2-4-15 (EXISTING) - ENCANA WELL - SUR | | | | | | Out of range |
| EAST RINN 2-8-15 (EXISTING) - ENCANA WELL - SUR | | | | | | Out of range |
| EAST RINN 3-6-15 (EXISTING) - ENCANA WELL - SUR | | | | | | Out of range |
| EAST RINN H UNIT 1 (EXISTING) - ENCANA WELL - N | | | | | | Out of range |
| HALEY 1-22 (EXISTING) - ENCANA WELL - NO SURVE | | | | | | Out of range |
| Haley 31-22 - DD - Plan #1 | | | | | | Out of range |
| Haley 4-2-22 - DD - Plan #1 | | | | | | Out of range |
| Haley 8-4-22 - DD - Plan #1 | | | | | | Out of range |
| JILLSON 0-6-22 (EXISTING) - ENCANA WELL - SURVE | 8,592.1 | 7,850.6 | 412.0 | 375.2 | 11.215 | CC |
| JILLSON 0-6-22 (EXISTING) - ENCANA WELL - SURVE | 8,600.0 | 7,850.7 | 412.1 | 375.2 | 11.184 | ES |
| JILLSON 0-6-22 (EXISTING) - ENCANA WELL - SURVE | 8,700.0 | 7,851.6 | 425.9 | 387.6 | 11.128 | SF |
| JILLSON 11-22 (EXISTING) - ENCANA WELL - NO SUR | 11,834.3 | 7,482.0 | 55.8 | -32.9 | 0.629 | Level 1, CC, ES, SF |
| JILLSON 1-22 (EXISTING) - ENCANA WELL - NO SURV | | | | | | Out of range |
| JILLSON 12-22 (EXISTING) - ENCANA WELL - NO SUR | 10,396.4 | 7,502.0 | 201.7 | 137.6 | 3.145 | CC |
| JILLSON 12-22 (EXISTING) - ENCANA WELL - NO SUR | 10,400.0 | 7,502.0 | 201.7 | 137.5 | 3.143 | ES, SF |
| JILLSON 14-22 (EXISTING) - ENCANA WELL - NO SUR | 7,943.9 | 7,548.5 | 229.1 | 201.2 | 8.223 | CC, ES, SF |
| JILLSON 21-22 (EXISTING) - ENCANA WELL - NO SUR | | | | | | Out of range |
| JILLSON 22-22 (EXISTING) - ENCANA WELL - NO SUR | | | | | | Out of range |
| JILLSON 2-8-22 (EXISTING) - ENCANA WELL - SURVE | | | | | | Out of range |
| JILLSON 3 (EXISTING) - FOUNDATION WELL - NO SU | 300.0 | 272.0 | 271.2 | 270.2 | 283.974 | CC, ES |
| JILLSON 3 (EXISTING) - FOUNDATION WELL - NO SU | 4,700.0 | 4,664.5 | 495.2 | 478.7 | 30.126 | SF |
| JILLSON 4-6-22 (EXISTING) - ENCANA WELL - SURVE | | | | | | Out of range |
| JILLSON 4-8-22 (EXISTING) - ENCANA WELL - SURVE | | | | | | Out of range |
| JILLSON 6 (EXISTING) - FOUNDATION WELL - NO SU | | | | | | Out of range |
| JILLSON GAS UNIT 1 (EXISTING) - ENCANA WELL - N | | | | | | Out of range |
| Jillson-East Rinn 3A-22H-M268 - Hz - Plan #1 | 200.0 | 200.0 | 8.3 | 7.6 | 13.518 | CC, ES |
| Jillson-East Rinn 3A-22H-M268 - Hz - Plan #1 | 14,900.0 | 14,672.7 | 286.1 | 127.7 | 1.806 | SF |
| Jillson-East Rinn 3C-22H-M268 - Hz - Plan #1 | 300.0 | 301.0 | 11.3 | 10.4 | 11.770 | CC, ES |
| Jillson-East Rinn 3C-22H-M268 - Hz - Plan #1 | 15,333.5 | 15,058.2 | 402.9 | 215.4 | 2.149 | SF |
| Jillson-East Rinn 3D-22H-M268 - Hz - Plan #1 | 300.0 | 301.0 | 19.6 | 18.6 | 20.361 | CC, ES |
| Jillson-East Rinn 3D-22H-M268 - Hz - Plan #1 | 600.0 | 600.6 | 24.7 | 22.7 | 12.246 | SF |
| Jillson-East Rinn 3E-22H-N268 - Hz - Plan #1 | | | | | | Out of range |
| Jillson-East Rinn 3F-22H-N268 - Hz - Plan #1 | | | | | | Out of range |
| Jillson-East Rinn 3G-22H-N268 - Hz - Plan #1 | | | | | | Out of range |
| Jillson-East Rinn 3H-22H-N268 - Hz - Plan #1 | | | | | | Out of range |
| NYGREN 12-22 (EXISTING) - KERR-MCGEE WELL - N | 9,302.8 | 7,518.0 | 270.8 | 224.7 | 5.884 | CC, ES, SF |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - ANDERSON 31-22 (EXISTING) - KERR-MCGEE WELL - NO SUR

**Offset Site Error:** 0.0 ft

**Survey Program:** 1500-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11,000.0 | 7,572.0 | 7,590.6 | 7,488.0 | 61.4 | 19.7 | -90.00 | 3,501.8 | -635.4 | 478.2 | 399.2 | 79.01 | 6.052 | |
| 11,100.0 | 7,572.0 | 7,590.6 | 7,488.0 | 63.1 | 19.7 | -90.00 | 3,501.8 | -635.4 | 448.6 | 367.8 | 80.73 | 5.557 | |
| 11,187.2 | 7,572.0 | 7,590.6 | 7,488.0 | 64.6 | 19.7 | -90.00 | 3,501.8 | -635.4 | 440.0 | 357.8 | 82.22 | 5.352 | CC |
| 11,200.0 | 7,572.0 | 7,590.6 | 7,488.0 | 64.8 | 19.7 | -90.00 | 3,501.8 | -635.4 | 440.2 | 357.8 | 82.44 | 5.340 | ES, SF |
| 11,300.0 | 7,572.0 | 7,590.6 | 7,488.0 | 66.6 | 19.7 | -90.00 | 3,501.8 | -635.4 | 454.3 | 370.1 | 84.16 | 5.398 | |
| 11,400.0 | 7,572.0 | 7,590.6 | 7,488.0 | 68.3 | 19.7 | -90.00 | 3,501.8 | -635.4 | 488.8 | 402.9 | 85.88 | 5.692 | |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - EAST RINN 13-15 (EXISTING) - ENCANA WELL - SURVEYS

**Offset Site Error:** 0.0 ft

**Survey Program:** 106-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14,200.0 | 7,572.0 | 7,872.1 | 7,490.3 | 116.9 | 37.1 | 90.71 | 6,914.5 | -61.5 | 495.6 | 364.2 | 131.35 | 3.773 | |
| 14,300.0 | 7,572.0 | 7,871.6 | 7,489.8 | 118.6 | 37.1 | 90.62 | 6,914.5 | -61.5 | 422.8 | 289.7 | 133.09 | 3.177 | |
| 14,400.0 | 7,572.0 | 7,871.1 | 7,489.3 | 120.3 | 37.1 | 90.52 | 6,914.5 | -61.5 | 363.2 | 228.4 | 134.83 | 2.694 | |
| 14,500.0 | 7,572.0 | 7,870.6 | 7,488.7 | 122.1 | 37.1 | 90.43 | 6,914.5 | -61.5 | 324.0 | 187.2 | 136.81 | 2.368 | |
| 14,600.0 | 7,572.0 | 7,870.0 | 7,488.2 | 123.8 | 37.1 | 90.33 | 6,914.5 | -61.5 | 308.1 | 168.8 | 139.33 | 2.211 | |
| 14,614.5 | 7,572.0 | 7,869.9 | 7,488.1 | 124.1 | 37.1 | 90.31 | 6,914.5 | -61.5 | 307.8 | 168.1 | 139.67 | 2.204 | CC, ES, SF |
| 14,700.0 | 7,572.0 | 7,869.4 | 7,487.6 | 125.6 | 37.1 | 90.21 | 6,914.5 | -61.5 | 317.0 | 175.5 | 141.51 | 2.240 | |
| 14,800.0 | 7,572.0 | 7,868.8 | 7,486.9 | 127.3 | 37.1 | 90.09 | 6,914.5 | -61.5 | 348.7 | 205.5 | 143.26 | 2.434 | |
| 14,900.0 | 7,572.0 | 7,868.1 | 7,486.3 | 129.0 | 37.1 | 89.97 | 6,914.5 | -61.5 | 397.8 | 253.3 | 144.51 | 2.753 | |
| 15,000.0 | 7,572.0 | 7,867.4 | 7,485.6 | 130.6 | 37.1 | 89.86 | 6,914.5 | -61.5 | 458.5 | 313.3 | 145.23 | 3.157 | |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - EAST RINN 15-12 (EXISTING) AL - VESSELS WELL - NO SURVE

**Offset Site Error:** 0.0 ft

**Survey Program:** 7570-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 14,200.0 | 7,572.0 | 7,473.0 | 7,473.0 | 116.9 | 13.0 | 90.00 | 6,927.2 | -216.8 | 437.5 | 307.6 | 129.88 | 3.368 | |
| 14,300.0 | 7,572.0 | 7,473.0 | 7,473.0 | 118.6 | 13.0 | 90.00 | 6,927.2 | -216.8 | 346.3 | 214.6 | 131.63 | 2.631 | |
| 14,400.0 | 7,572.0 | 7,473.0 | 7,473.0 | 120.3 | 13.0 | 90.00 | 6,927.2 | -216.8 | 261.5 | 128.1 | 133.37 | 1.961 | |
| 14,500.0 | 7,572.0 | 7,473.0 | 7,473.0 | 122.1 | 13.0 | 90.00 | 6,927.2 | -216.8 | 191.8 | 56.7 | 135.13 | 1.420 | Level 3 |
| 14,600.0 | 7,572.0 | 7,473.0 | 7,473.0 | 123.8 | 13.0 | 90.00 | 6,927.2 | -216.8 | 153.8 | 17.2 | 136.57 | 1.126 | Level 2 |
| 14,623.7 | 7,572.0 | 7,473.0 | 7,473.0 | 124.2 | 13.0 | 90.00 | 6,927.2 | -216.8 | 152.1 | 15.3 | 136.82 | 1.112 | Level 2, CC, ES, SF |
| 14,700.0 | 7,572.0 | 7,473.0 | 7,473.0 | 125.6 | 13.0 | 90.00 | 6,927.2 | -216.8 | 168.3 | 30.9 | 137.41 | 1.225 | Level 2 |
| 14,800.0 | 7,572.0 | 7,473.0 | 7,473.0 | 127.3 | 13.0 | 90.00 | 6,927.2 | -216.8 | 225.5 | 87.8 | 137.67 | 1.638 | |
| 14,900.0 | 7,572.0 | 7,473.0 | 7,473.0 | 129.0 | 13.0 | 90.00 | 6,927.2 | -216.8 | 301.7 | 164.4 | 137.32 | 2.197 | |
| 15,000.0 | 7,572.0 | 7,473.0 | 7,473.0 | 130.6 | 13.0 | 90.00 | 6,927.2 | -216.8 | 385.6 | 249.2 | 136.39 | 2.827 | |
| 15,100.0 | 7,572.0 | 7,473.0 | 7,473.0 | 132.2 | 13.0 | 90.00 | 6,927.2 | -216.8 | 472.9 | 338.0 | 134.87 | 3.506 | |

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|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - JILLSON 0-6-22 (EXISTING) - ENCANA WELL - SURVEYS

**Offset Site Error:** 0.0 ft

**Survey Program:** 73-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8,400.0 | 7,572.0 | 7,848.7 | 7,571.7 | 19.8 | 32.8 | -89.08 | 906.7 | -607.3 | 454.6 | 420.4 | 34.15 | 13.311 | |
| 8,500.0 | 7,572.0 | 7,849.7 | 7,572.7 | 21.1 | 32.8 | -89.22 | 906.7 | -607.3 | 422.1 | 386.7 | 35.47 | 11.903 | |
| 8,592.1 | 7,572.0 | 7,850.6 | 7,573.6 | 22.3 | 32.8 | -89.35 | 906.7 | -607.4 | 412.0 | 375.2 | 36.73 | 11.215 | CC |
| 8,600.0 | 7,572.0 | 7,850.7 | 7,573.7 | 22.4 | 32.8 | -89.36 | 906.7 | -607.4 | 412.1 | 375.2 | 36.84 | 11.184 | ES |
| 8,700.0 | 7,572.0 | 7,851.6 | 7,574.7 | 23.9 | 32.8 | -89.50 | 906.7 | -607.4 | 425.9 | 387.6 | 38.27 | 11.128 | SF |
| 8,800.0 | 7,572.0 | 7,852.6 | 7,575.7 | 25.3 | 32.8 | -89.64 | 906.7 | -607.4 | 461.5 | 421.7 | 39.74 | 11.613 | |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - JILLSON 11-22 (EXISTING) - ENCANA WELL - NO SURVEYS — **Offset Site Error:** 0.0 ft

**Survey Program:** 8046-Geolink MWD — **Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 11,400.0 | 7,572.0 | 7,482.0 | 7,482.0 | 68.3 | 13.1 | 90.00 | 4,149.2 | -139.7 | 438.1 | 356.8 | 81.25 | 5.392 | |
| 11,500.0 | 7,572.0 | 7,482.0 | 7,482.0 | 70.0 | 13.1 | 90.00 | 4,149.2 | -139.7 | 339.1 | 256.2 | 82.97 | 4.088 | |
| 11,600.0 | 7,572.0 | 7,482.0 | 7,482.0 | 71.7 | 13.1 | 90.00 | 4,149.2 | -139.7 | 241.1 | 156.4 | 84.69 | 2.846 | |
| 11,700.0 | 7,572.0 | 7,482.0 | 7,482.0 | 73.4 | 13.1 | 90.00 | 4,149.2 | -139.7 | 145.6 | 59.2 | 86.41 | 1.685 | |
| 11,800.0 | 7,572.0 | 7,482.0 | 7,482.0 | 75.2 | 13.1 | 90.00 | 4,149.2 | -139.7 | 65.6 | -22.6 | 88.14 | 0.744 | Level 1 |
| 11,834.3 | 7,572.0 | 7,482.0 | 7,482.0 | 75.8 | 13.1 | 90.00 | 4,149.2 | -139.7 | 55.8 | -32.9 | 88.75 | 0.629 | Level 1, CC, ES, SF |
| 11,900.0 | 7,572.0 | 7,482.0 | 7,482.0 | 76.9 | 13.1 | 90.00 | 4,149.2 | -139.7 | 86.3 | -3.6 | 89.90 | 0.960 | Level 1 |
| 12,000.0 | 7,572.0 | 7,482.0 | 7,482.0 | 78.6 | 13.1 | 90.00 | 4,149.2 | -139.7 | 175.4 | 83.8 | 91.66 | 1.914 | |
| 12,100.0 | 7,572.0 | 7,482.0 | 7,482.0 | 80.3 | 13.1 | 90.00 | 4,149.2 | -139.7 | 272.6 | 179.2 | 93.40 | 2.918 | |
| 12,200.0 | 7,572.0 | 7,482.0 | 7,482.0 | 82.1 | 13.1 | 90.00 | 4,149.2 | -139.7 | 371.5 | 276.4 | 95.12 | 3.905 | |
| 12,300.0 | 7,572.0 | 7,482.0 | 7,482.0 | 83.8 | 13.1 | 90.00 | 4,149.2 | -139.7 | 471.0 | 374.1 | 96.84 | 4.863 | |

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|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - JILLSON 12-22 (EXISTING) - ENCANA WELL - NO SURVEYS

**Offset Site Error:** 0.0 ft

**Survey Program:** 8074-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,000.0 | 7,572.0 | 7,502.0 | 7,502.0 | 44.5 | 13.1 | 90.00 | 2,711.0 | 6.3 | 444.7 | 387.3 | 57.45 | 7.741 | |
| 10,100.0 | 7,572.0 | 7,502.0 | 7,502.0 | 46.2 | 13.1 | 90.00 | 2,711.0 | 6.3 | 358.5 | 299.3 | 59.13 | 6.063 | |
| 10,200.0 | 7,572.0 | 7,502.0 | 7,502.0 | 47.8 | 13.1 | 90.00 | 2,711.0 | 6.3 | 281.5 | 220.7 | 60.81 | 4.629 | |
| 10,300.0 | 7,572.0 | 7,502.0 | 7,502.0 | 49.5 | 13.1 | 90.00 | 2,711.0 | 6.3 | 223.5 | 161.0 | 62.50 | 3.576 | |
| 10,396.4 | 7,572.0 | 7,502.0 | 7,502.0 | 51.1 | 13.1 | 90.00 | 2,711.0 | 6.3 | 201.7 | 137.6 | 64.13 | 3.145 | CC |
| 10,400.0 | 7,572.0 | 7,502.0 | 7,502.0 | 51.2 | 13.1 | 90.00 | 2,711.0 | 6.3 | 201.7 | 137.5 | 64.19 | 3.143 | ES, SF |
| 10,500.0 | 7,572.0 | 7,502.0 | 7,502.0 | 52.9 | 13.1 | 90.00 | 2,711.0 | 6.3 | 226.8 | 160.9 | 65.89 | 3.442 | |
| 10,600.0 | 7,572.0 | 7,502.0 | 7,502.0 | 54.6 | 13.1 | 90.00 | 2,711.0 | 6.3 | 286.6 | 219.0 | 67.58 | 4.241 | |
| 10,700.0 | 7,572.0 | 7,502.0 | 7,502.0 | 56.3 | 13.1 | 90.00 | 2,711.0 | 6.3 | 364.5 | 295.2 | 69.29 | 5.261 | |
| 10,800.0 | 7,572.0 | 7,502.0 | 7,502.0 | 58.0 | 13.1 | 90.00 | 2,711.0 | 6.3 | 451.2 | 380.2 | 70.99 | 6.356 | |

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|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - JILLSON 14-22 (EXISTING) - ENCANA WELL - NO SURVEYS

**Offset Site Error:** 0.0 ft

**Survey Program:** 8164-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 7.42 | 258.6 | 33.7 | 261.9 | | | | |
| 100.0 | 100.0 | 76.0 | 76.0 | 0.1 | 0.1 | 7.42 | 258.6 | 33.7 | 260.8 | 260.6 | 0.26 | 988.960 | |
| 200.0 | 200.0 | 176.0 | 176.0 | 0.3 | 0.3 | 7.42 | 258.6 | 33.7 | 260.8 | 260.2 | 0.61 | 425.634 | |
| 300.0 | 300.0 | 276.0 | 276.0 | 0.5 | 0.5 | 7.42 | 258.6 | 33.7 | 260.8 | 259.9 | 0.96 | 271.171 | |
| 400.0 | 400.0 | 376.0 | 376.0 | 0.7 | 0.7 | 160.20 | 258.6 | 33.7 | 261.7 | 260.3 | 1.31 | 199.598 | |
| 500.0 | 500.0 | 476.0 | 476.0 | 0.8 | 0.8 | 160.38 | 258.6 | 33.7 | 264.1 | 262.5 | 1.66 | 159.107 | |
| 600.0 | 599.9 | 575.9 | 575.9 | 1.0 | 1.0 | 160.68 | 258.6 | 33.7 | 268.2 | 266.2 | 2.01 | 133.490 | |
| 700.0 | 699.7 | 675.7 | 675.7 | 1.2 | 1.2 | 161.08 | 258.6 | 33.7 | 273.7 | 271.4 | 2.36 | 116.016 | |
| 800.0 | 799.5 | 775.5 | 775.5 | 1.4 | 1.4 | 161.48 | 258.6 | 33.7 | 279.4 | 276.7 | 2.71 | 103.097 | |
| 900.0 | 899.3 | 875.3 | 875.3 | 1.6 | 1.5 | 161.86 | 258.6 | 33.7 | 285.1 | 282.0 | 3.06 | 93.142 | |
| 1,000.0 | 999.2 | 975.2 | 975.2 | 1.8 | 1.7 | 162.23 | 258.6 | 33.7 | 290.8 | 287.4 | 3.41 | 85.238 | |
| 1,100.0 | 1,099.0 | 1,075.0 | 1,075.0 | 2.0 | 1.9 | 162.58 | 258.6 | 33.7 | 296.5 | 292.8 | 3.76 | 78.813 | |
| 1,200.0 | 1,198.8 | 1,174.8 | 1,174.8 | 2.2 | 2.1 | 162.92 | 258.6 | 33.7 | 302.2 | 298.1 | 4.11 | 73.487 | |
| 1,300.0 | 1,298.6 | 1,274.6 | 1,274.6 | 2.4 | 2.2 | 163.25 | 258.6 | 33.7 | 308.0 | 303.5 | 4.46 | 69.002 | |
| 1,400.0 | 1,398.4 | 1,374.4 | 1,374.4 | 2.6 | 2.4 | 163.56 | 258.6 | 33.7 | 313.7 | 308.9 | 4.81 | 65.173 | |
| 1,500.0 | 1,498.3 | 1,474.3 | 1,474.3 | 2.8 | 2.6 | 163.87 | 258.6 | 33.7 | 319.5 | 314.3 | 5.16 | 61.867 | |
| 1,600.0 | 1,598.1 | 1,574.1 | 1,574.1 | 3.0 | 2.7 | 164.16 | 258.6 | 33.7 | 325.2 | 319.7 | 5.51 | 58.983 | |
| 1,700.0 | 1,697.9 | 1,673.9 | 1,673.9 | 3.2 | 2.9 | 164.44 | 258.6 | 33.7 | 331.0 | 325.1 | 5.86 | 56.446 | |
| 1,800.0 | 1,797.7 | 1,773.7 | 1,773.7 | 3.4 | 3.1 | 164.72 | 258.6 | 33.7 | 336.8 | 330.6 | 6.21 | 54.197 | |
| 1,900.0 | 1,897.5 | 1,873.5 | 1,873.5 | 3.6 | 3.3 | 164.98 | 258.6 | 33.7 | 342.6 | 336.0 | 6.56 | 52.190 | |
| 2,000.0 | 1,997.4 | 1,973.4 | 1,973.4 | 3.8 | 3.4 | 165.24 | 258.6 | 33.7 | 348.4 | 341.4 | 6.91 | 50.387 | |
| 2,100.0 | 2,097.2 | 2,073.2 | 2,073.2 | 4.0 | 3.6 | 165.48 | 258.6 | 33.7 | 354.2 | 346.9 | 7.26 | 48.760 | |
| 2,200.0 | 2,197.0 | 2,173.0 | 2,173.0 | 4.2 | 3.8 | 165.72 | 258.6 | 33.7 | 360.0 | 352.3 | 7.61 | 47.283 | |
| 2,300.0 | 2,296.8 | 2,272.8 | 2,272.8 | 4.4 | 4.0 | 165.95 | 258.6 | 33.7 | 365.8 | 357.8 | 7.96 | 45.937 | |
| 2,400.0 | 2,396.6 | 2,372.6 | 2,372.6 | 4.6 | 4.1 | 166.18 | 258.6 | 33.7 | 371.6 | 363.3 | 8.31 | 44.706 | |
| 2,500.0 | 2,496.5 | 2,472.5 | 2,472.5 | 4.8 | 4.3 | 166.40 | 258.6 | 33.7 | 377.4 | 368.8 | 8.66 | 43.574 | |
| 2,600.0 | 2,596.3 | 2,572.3 | 2,572.3 | 5.0 | 4.5 | 166.61 | 258.6 | 33.7 | 383.2 | 374.2 | 9.01 | 42.532 | |
| 2,700.0 | 2,696.1 | 2,672.1 | 2,672.1 | 5.2 | 4.7 | 166.81 | 258.6 | 33.7 | 389.1 | 379.7 | 9.36 | 41.568 | |
| 2,800.0 | 2,795.9 | 2,771.9 | 2,771.9 | 5.4 | 4.8 | 167.01 | 258.6 | 33.7 | 394.9 | 385.2 | 9.71 | 40.674 | |
| 2,900.0 | 2,895.7 | 2,871.7 | 2,871.7 | 5.6 | 5.0 | 167.20 | 258.6 | 33.7 | 400.8 | 390.7 | 10.06 | 39.842 | |
| 3,000.0 | 2,995.6 | 2,971.6 | 2,971.6 | 5.8 | 5.2 | 167.39 | 258.6 | 33.7 | 406.6 | 396.2 | 10.41 | 39.068 | |
| 3,100.0 | 3,095.4 | 3,071.4 | 3,071.4 | 6.1 | 5.4 | 167.57 | 258.6 | 33.7 | 412.4 | 401.7 | 10.76 | 38.343 | |
| 3,200.0 | 3,195.2 | 3,171.2 | 3,171.2 | 6.3 | 5.5 | 167.75 | 258.6 | 33.7 | 418.3 | 407.2 | 11.11 | 37.665 | |
| 3,300.0 | 3,295.0 | 3,271.0 | 3,271.0 | 6.5 | 5.7 | 167.92 | 258.6 | 33.7 | 424.2 | 412.7 | 11.45 | 37.029 | |
| 3,400.0 | 3,394.8 | 3,370.8 | 3,370.8 | 6.7 | 5.9 | 168.09 | 258.6 | 33.7 | 430.0 | 418.2 | 11.80 | 36.431 | |
| 3,500.0 | 3,494.7 | 3,470.7 | 3,470.7 | 6.9 | 6.1 | 168.25 | 258.6 | 33.7 | 435.9 | 423.7 | 12.15 | 35.868 | |
| 3,600.0 | 3,594.5 | 3,570.5 | 3,570.5 | 7.1 | 6.2 | 168.41 | 258.6 | 33.7 | 441.8 | 429.3 | 12.50 | 35.336 | |
| 3,700.0 | 3,694.3 | 3,670.3 | 3,670.3 | 7.3 | 6.4 | 168.56 | 258.6 | 33.7 | 447.6 | 434.8 | 12.85 | 34.833 | |
| 3,800.0 | 3,794.1 | 3,770.1 | 3,770.1 | 7.5 | 6.6 | 168.71 | 258.6 | 33.7 | 453.5 | 440.3 | 13.20 | 34.358 | |
| 3,900.0 | 3,893.9 | 3,869.9 | 3,869.9 | 7.7 | 6.8 | 168.86 | 258.6 | 33.7 | 459.4 | 445.8 | 13.55 | 33.907 | |
| 4,000.0 | 3,993.8 | 3,969.8 | 3,969.8 | 7.9 | 6.9 | 169.00 | 258.6 | 33.7 | 465.3 | 451.4 | 13.90 | 33.479 | |
| 4,100.0 | 4,093.6 | 4,069.6 | 4,069.6 | 8.1 | 7.1 | 169.14 | 258.6 | 33.7 | 471.2 | 456.9 | 14.25 | 33.073 | |
| 4,200.0 | 4,193.4 | 4,169.4 | 4,169.4 | 8.3 | 7.3 | 169.27 | 258.6 | 33.7 | 477.0 | 462.4 | 14.59 | 32.685 | |
| 4,300.0 | 4,293.2 | 4,269.2 | 4,269.2 | 8.5 | 7.5 | 169.41 | 258.6 | 33.7 | 482.9 | 468.0 | 14.94 | 32.317 | |
| 4,400.0 | 4,393.0 | 4,369.0 | 4,369.0 | 8.7 | 7.6 | 169.54 | 258.6 | 33.7 | 488.8 | 473.5 | 15.29 | 31.965 | |
| 4,500.0 | 4,492.9 | 4,468.9 | 4,468.9 | 8.9 | 7.8 | 169.66 | 258.6 | 33.7 | 494.7 | 479.1 | 15.64 | 31.629 | |
| 7,500.0 | 7,430.9 | 7,406.9 | 7,406.9 | 13.7 | 12.9 | 41.51 | 258.6 | 33.7 | 467.5 | 444.6 | 22.90 | 20.417 | |
| 7,600.0 | 7,489.7 | 7,465.7 | 7,465.7 | 13.7 | 13.0 | 54.15 | 258.6 | 33.7 | 399.6 | 375.8 | 23.85 | 16.754 | |
| 7,700.0 | 7,533.6 | 7,509.6 | 7,509.6 | 13.8 | 13.1 | 69.72 | 258.6 | 33.7 | 330.5 | 305.0 | 25.55 | 12.936 | |
| 7,800.0 | 7,561.3 | 7,537.3 | 7,537.3 | 14.2 | 13.2 | 83.21 | 258.6 | 33.7 | 270.0 | 243.2 | 26.81 | 10.071 | |
| 7,900.0 | 7,571.9 | 7,547.9 | 7,547.9 | 14.8 | 13.2 | 89.79 | 258.6 | 33.7 | 233.3 | 205.8 | 27.53 | 8.474 | |
| 7,943.9 | 7,572.5 | 7,548.5 | 7,548.5 | 15.1 | 13.2 | 90.00 | 258.6 | 33.7 | 229.1 | 201.2 | 27.86 | 8.223 | CC, ES, SF |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - JILLSON 14-22 (EXISTING) - ENCANA WELL - NO SURVEYS

**Offset Site Error:** 0.0 ft

**Survey Program:** 8164-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8,000.0 | 7,572.0 | 7,548.0 | 7,548.0 | 15.5 | 13.2 | 90.00 | 258.6 | 33.7 | 235.8 | 207.5 | 28.29 | 8.337 | |
| 8,100.0 | 7,572.0 | 7,548.0 | 7,548.0 | 16.4 | 13.2 | 90.00 | 258.6 | 33.7 | 277.2 | 248.0 | 29.20 | 9.491 | |
| 8,200.0 | 7,572.0 | 7,548.0 | 7,548.0 | 17.4 | 13.2 | 90.00 | 258.6 | 33.7 | 343.5 | 313.3 | 30.25 | 11.357 | |
| 8,300.0 | 7,572.0 | 7,548.0 | 7,548.0 | 18.6 | 13.2 | 90.00 | 258.6 | 33.7 | 423.3 | 391.9 | 31.41 | 13.480 | |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - JILLSON 3 (EXISTING) - FOUNDATION WELL - NO SURVEYS

**Offset Site Error:** 0.0 ft

**Survey Program:** 5039-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -11.27 | 265.9 | -53.0 | 272.6 | | | | |
| 100.0 | 100.0 | 72.0 | 72.0 | 0.1 | 0.1 | -11.27 | 265.9 | -53.0 | 271.2 | 270.9 | 0.26 | 1,056.091 | |
| 200.0 | 200.0 | 172.0 | 172.0 | 0.3 | 0.3 | -11.27 | 265.9 | -53.0 | 271.2 | 270.6 | 0.61 | 447.594 | |
| 300.0 | 300.0 | 272.0 | 272.0 | 0.5 | 0.5 | -11.27 | 265.9 | -53.0 | 271.2 | 270.2 | 0.95 | 283.974 | CC, ES |
| 400.0 | 400.0 | 372.0 | 372.0 | 0.7 | 0.6 | 141.55 | 265.9 | -53.0 | 271.8 | 270.5 | 1.30 | 208.449 | |
| 500.0 | 500.0 | 472.0 | 472.0 | 0.8 | 0.8 | 141.88 | 265.9 | -53.0 | 273.9 | 272.2 | 1.65 | 165.548 | |
| 600.0 | 599.9 | 571.9 | 571.9 | 1.0 | 1.0 | 142.42 | 265.9 | -53.0 | 277.3 | 275.3 | 2.01 | 138.182 | |
| 700.0 | 699.7 | 671.7 | 671.7 | 1.2 | 1.2 | 143.13 | 265.9 | -53.0 | 282.0 | 279.6 | 2.36 | 119.392 | |
| 800.0 | 799.5 | 771.5 | 771.5 | 1.4 | 1.3 | 143.84 | 265.9 | -53.0 | 286.8 | 284.1 | 2.72 | 105.536 | |
| 900.0 | 899.3 | 871.3 | 871.3 | 1.6 | 1.5 | 144.54 | 265.9 | -53.0 | 291.7 | 288.6 | 3.07 | 94.895 | |
| 1,000.0 | 999.2 | 971.2 | 971.2 | 1.8 | 1.7 | 145.21 | 265.9 | -53.0 | 296.6 | 293.1 | 3.43 | 86.476 | |
| 1,100.0 | 1,099.0 | 1,071.0 | 1,071.0 | 2.0 | 1.9 | 145.86 | 265.9 | -53.0 | 301.5 | 297.7 | 3.79 | 79.654 | |
| 1,200.0 | 1,198.8 | 1,170.8 | 1,170.8 | 2.2 | 2.0 | 146.49 | 265.9 | -53.0 | 306.5 | 302.4 | 4.14 | 74.018 | |
| 1,300.0 | 1,298.6 | 1,270.6 | 1,270.6 | 2.4 | 2.2 | 147.10 | 265.9 | -53.0 | 311.5 | 307.0 | 4.50 | 69.285 | |
| 1,400.0 | 1,398.4 | 1,370.4 | 1,370.4 | 2.6 | 2.4 | 147.68 | 265.9 | -53.0 | 316.6 | 311.7 | 4.85 | 65.257 | |
| 1,500.0 | 1,498.3 | 1,470.3 | 1,470.3 | 2.8 | 2.6 | 148.25 | 265.9 | -53.0 | 321.6 | 316.4 | 5.21 | 61.789 | |
| 1,600.0 | 1,598.1 | 1,570.1 | 1,570.1 | 3.0 | 2.7 | 148.81 | 265.9 | -53.0 | 326.8 | 321.2 | 5.56 | 58.771 | |
| 1,700.0 | 1,697.9 | 1,669.9 | 1,669.9 | 3.2 | 2.9 | 149.34 | 265.9 | -53.0 | 331.9 | 326.0 | 5.91 | 56.123 | |
| 1,800.0 | 1,797.7 | 1,769.7 | 1,769.7 | 3.4 | 3.1 | 149.86 | 265.9 | -53.0 | 337.1 | 330.8 | 6.27 | 53.782 | |
| 1,900.0 | 1,897.5 | 1,869.5 | 1,869.5 | 3.6 | 3.3 | 150.37 | 265.9 | -53.0 | 342.3 | 335.7 | 6.62 | 51.697 | |
| 2,000.0 | 1,997.4 | 1,969.4 | 1,969.4 | 3.8 | 3.4 | 150.85 | 265.9 | -53.0 | 347.5 | 340.5 | 6.97 | 49.829 | |
| 2,100.0 | 2,097.2 | 2,069.2 | 2,069.2 | 4.0 | 3.6 | 151.33 | 265.9 | -53.0 | 352.7 | 345.4 | 7.33 | 48.146 | |
| 2,200.0 | 2,197.0 | 2,169.0 | 2,169.0 | 4.2 | 3.8 | 151.79 | 265.9 | -53.0 | 358.0 | 350.3 | 7.68 | 46.622 | |
| 2,300.0 | 2,296.8 | 2,268.8 | 2,268.8 | 4.4 | 4.0 | 152.23 | 265.9 | -53.0 | 363.3 | 355.3 | 8.03 | 45.237 | |
| 2,400.0 | 2,396.6 | 2,368.6 | 2,368.6 | 4.6 | 4.1 | 152.67 | 265.9 | -53.0 | 368.6 | 360.2 | 8.38 | 43.971 | |
| 2,500.0 | 2,496.5 | 2,468.5 | 2,468.5 | 4.8 | 4.3 | 153.09 | 265.9 | -53.0 | 374.0 | 365.2 | 8.74 | 42.811 | |
| 2,600.0 | 2,596.3 | 2,568.3 | 2,568.3 | 5.0 | 4.5 | 153.50 | 265.9 | -53.0 | 379.3 | 370.2 | 9.09 | 41.744 | |
| 2,700.0 | 2,696.1 | 2,668.1 | 2,668.1 | 5.2 | 4.7 | 153.90 | 265.9 | -53.0 | 384.7 | 375.3 | 9.44 | 40.760 | |
| 2,800.0 | 2,795.9 | 2,767.9 | 2,767.9 | 5.4 | 4.8 | 154.28 | 265.9 | -53.0 | 390.1 | 380.3 | 9.79 | 39.848 | |
| 2,900.0 | 2,895.7 | 2,867.7 | 2,867.7 | 5.6 | 5.0 | 154.66 | 265.9 | -53.0 | 395.5 | 385.4 | 10.14 | 39.003 | |
| 3,000.0 | 2,995.6 | 2,967.6 | 2,967.6 | 5.8 | 5.2 | 155.03 | 265.9 | -53.0 | 400.9 | 390.4 | 10.49 | 38.216 | |
| 3,100.0 | 3,095.4 | 3,067.4 | 3,067.4 | 6.1 | 5.4 | 155.38 | 265.9 | -53.0 | 406.4 | 395.5 | 10.84 | 37.481 | |
| 3,200.0 | 3,195.2 | 3,167.2 | 3,167.2 | 6.3 | 5.5 | 155.73 | 265.9 | -53.0 | 411.8 | 400.6 | 11.19 | 36.795 | |
| 3,300.0 | 3,295.0 | 3,267.0 | 3,267.0 | 6.5 | 5.7 | 156.07 | 265.9 | -53.0 | 417.3 | 405.7 | 11.54 | 36.152 | |
| 3,400.0 | 3,394.8 | 3,366.8 | 3,366.8 | 6.7 | 5.9 | 156.40 | 265.9 | -53.0 | 422.8 | 410.9 | 11.89 | 35.549 | |
| 3,500.0 | 3,494.7 | 3,466.7 | 3,466.7 | 6.9 | 6.1 | 156.72 | 265.9 | -53.0 | 428.3 | 416.0 | 12.24 | 34.982 | |
| 3,600.0 | 3,594.5 | 3,566.5 | 3,566.5 | 7.1 | 6.2 | 157.03 | 265.9 | -53.0 | 433.8 | 421.2 | 12.59 | 34.447 | |
| 3,700.0 | 3,694.3 | 3,666.3 | 3,666.3 | 7.3 | 6.4 | 157.34 | 265.9 | -53.0 | 439.3 | 426.4 | 12.94 | 33.943 | |
| 3,800.0 | 3,794.1 | 3,766.1 | 3,766.1 | 7.5 | 6.6 | 157.63 | 265.9 | -53.0 | 444.9 | 431.6 | 13.29 | 33.466 | |
| 3,900.0 | 3,893.9 | 3,865.9 | 3,865.9 | 7.7 | 6.7 | 157.92 | 265.9 | -53.0 | 450.4 | 436.8 | 13.64 | 33.015 | |
| 4,000.0 | 3,993.8 | 3,965.8 | 3,965.8 | 7.9 | 6.9 | 158.21 | 265.9 | -53.0 | 456.0 | 442.0 | 13.99 | 32.588 | |
| 4,100.0 | 4,093.6 | 4,065.6 | 4,065.6 | 8.1 | 7.1 | 158.48 | 265.9 | -53.0 | 461.5 | 447.2 | 14.34 | 32.182 | |
| 4,200.0 | 4,193.4 | 4,165.4 | 4,165.4 | 8.3 | 7.3 | 158.75 | 265.9 | -53.0 | 467.1 | 452.4 | 14.69 | 31.797 | |
| 4,300.0 | 4,293.2 | 4,265.2 | 4,265.2 | 8.5 | 7.4 | 159.02 | 265.9 | -53.0 | 472.7 | 457.7 | 15.04 | 31.430 | |
| 4,400.0 | 4,393.0 | 4,365.0 | 4,365.0 | 8.7 | 7.6 | 159.27 | 265.9 | -53.0 | 478.3 | 462.9 | 15.39 | 31.081 | |
| 4,500.0 | 4,492.9 | 4,464.9 | 4,464.9 | 8.9 | 7.8 | 159.52 | 265.9 | -53.0 | 483.9 | 468.2 | 15.74 | 30.748 | |
| 4,600.0 | 4,592.7 | 4,564.7 | 4,564.7 | 9.1 | 8.0 | 159.77 | 265.9 | -53.0 | 489.5 | 473.4 | 16.09 | 30.430 | |
| 4,700.0 | 4,692.5 | 4,664.5 | 4,664.5 | 9.3 | 8.1 | 160.01 | 265.9 | -53.0 | 495.2 | 478.7 | 16.44 | 30.126 | SF |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3A-22H-M268 - Hz - Plan #1

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | -89.95 | 0.0 | -8.3 | 8.3 | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | -89.95 | 0.0 | -8.3 | 8.3 | 8.0 | 0.26 | 31.542 | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | -89.95 | 0.0 | -8.3 | 8.3 | 7.6 | 0.61 | 13.518 | CC, ES |
| 300.0 | 300.0 | 299.9 | 299.9 | 0.5 | 0.5 | -93.95 | -0.6 | -8.9 | 8.9 | 7.9 | 0.96 | 9.264 | |
| 400.0 | 400.0 | 399.7 | 399.7 | 0.7 | 0.7 | 53.36 | -2.5 | -10.7 | 10.4 | 9.1 | 1.31 | 7.967 | |
| 500.0 | 500.0 | 499.6 | 499.4 | 0.8 | 0.8 | 51.22 | -5.6 | -13.8 | 12.4 | 10.8 | 1.67 | 7.451 | |
| 600.0 | 599.9 | 599.3 | 599.0 | 1.0 | 1.0 | 51.21 | -9.9 | -18.0 | 14.7 | 12.7 | 2.03 | 7.265 | |
| 700.0 | 699.7 | 699.2 | 698.6 | 1.2 | 1.3 | 52.40 | -15.2 | -23.3 | 17.3 | 14.9 | 2.40 | 7.212 | |
| 800.0 | 799.5 | 799.2 | 798.3 | 1.4 | 1.5 | 53.46 | -20.6 | -28.6 | 19.9 | 17.1 | 2.78 | 7.162 | |
| 900.0 | 899.3 | 899.1 | 898.0 | 1.6 | 1.7 | 54.28 | -26.1 | -34.0 | 22.5 | 19.4 | 3.16 | 7.119 | |
| 1,000.0 | 999.2 | 999.1 | 997.6 | 1.8 | 1.9 | 54.93 | -31.5 | -39.4 | 25.1 | 21.6 | 3.55 | 7.081 | |
| 1,100.0 | 1,099.0 | 1,099.1 | 1,097.3 | 2.0 | 2.1 | 55.45 | -36.9 | -44.7 | 27.7 | 23.8 | 3.93 | 7.048 | |
| 1,200.0 | 1,198.8 | 1,199.0 | 1,197.0 | 2.2 | 2.3 | 55.89 | -42.3 | -50.1 | 30.3 | 26.0 | 4.32 | 7.019 | |
| 1,300.0 | 1,298.6 | 1,299.0 | 1,296.7 | 2.4 | 2.5 | 56.25 | -47.7 | -55.4 | 32.9 | 28.2 | 4.71 | 6.994 | |
| 1,400.0 | 1,398.4 | 1,399.0 | 1,396.3 | 2.6 | 2.8 | 56.57 | -53.2 | -60.8 | 35.5 | 30.4 | 5.10 | 6.971 | |
| 1,500.0 | 1,498.3 | 1,498.9 | 1,496.0 | 2.8 | 3.0 | 56.84 | -58.6 | -66.1 | 38.1 | 32.6 | 5.49 | 6.951 | |
| 1,600.0 | 1,598.1 | 1,598.9 | 1,595.7 | 3.0 | 3.2 | 57.07 | -64.0 | -71.5 | 40.7 | 34.9 | 5.88 | 6.934 | |
| 1,700.0 | 1,697.9 | 1,698.9 | 1,695.4 | 3.2 | 3.4 | 57.28 | -69.4 | -76.8 | 43.3 | 37.1 | 6.27 | 6.918 | |
| 1,800.0 | 1,797.7 | 1,798.8 | 1,795.0 | 3.4 | 3.6 | 57.46 | -74.8 | -82.2 | 46.0 | 39.3 | 6.66 | 6.903 | |
| 1,900.0 | 1,897.5 | 1,898.8 | 1,894.7 | 3.6 | 3.9 | 57.63 | -80.3 | -87.5 | 48.6 | 41.5 | 7.05 | 6.890 | |
| 2,000.0 | 1,997.4 | 1,998.8 | 1,994.4 | 3.8 | 4.1 | 57.77 | -85.7 | -92.9 | 51.2 | 43.7 | 7.44 | 6.879 | |
| 2,100.0 | 2,097.2 | 2,098.7 | 2,094.1 | 4.0 | 4.3 | 57.91 | -91.1 | -98.2 | 53.8 | 46.0 | 7.83 | 6.868 | |
| 2,200.0 | 2,197.0 | 2,198.7 | 2,193.7 | 4.2 | 4.5 | 58.03 | -96.5 | -103.6 | 56.4 | 48.2 | 8.22 | 6.858 | |
| 2,300.0 | 2,296.8 | 2,298.7 | 2,293.4 | 4.4 | 4.7 | 58.14 | -101.9 | -109.0 | 59.0 | 50.4 | 8.62 | 6.849 | |
| 2,400.0 | 2,396.6 | 2,398.6 | 2,393.1 | 4.6 | 4.9 | 58.24 | -107.4 | -114.3 | 61.6 | 52.6 | 9.01 | 6.841 | |
| 2,500.0 | 2,496.5 | 2,498.6 | 2,492.8 | 4.8 | 5.2 | 58.33 | -112.8 | -119.7 | 64.2 | 54.8 | 9.40 | 6.833 | |
| 2,600.0 | 2,596.3 | 2,598.6 | 2,592.4 | 5.0 | 5.4 | 58.41 | -118.2 | -125.0 | 66.8 | 57.0 | 9.79 | 6.826 | |
| 2,700.0 | 2,696.1 | 2,698.5 | 2,692.1 | 5.2 | 5.6 | 58.49 | -123.6 | -130.4 | 69.4 | 59.3 | 10.18 | 6.819 | |
| 2,800.0 | 2,795.9 | 2,798.5 | 2,791.8 | 5.4 | 5.8 | 58.57 | -129.1 | -135.7 | 72.1 | 61.5 | 10.58 | 6.813 | |
| 2,900.0 | 2,895.7 | 2,898.5 | 2,891.5 | 5.6 | 6.0 | 58.63 | -134.5 | -141.1 | 74.7 | 63.7 | 10.97 | 6.807 | |
| 3,000.0 | 2,995.6 | 2,998.4 | 2,991.1 | 5.8 | 6.3 | 58.70 | -139.9 | -146.4 | 77.3 | 65.9 | 11.36 | 6.801 | |
| 3,100.0 | 3,095.4 | 3,098.4 | 3,090.8 | 6.1 | 6.5 | 58.76 | -145.3 | -151.8 | 79.9 | 68.1 | 11.76 | 6.796 | |
| 3,200.0 | 3,195.2 | 3,198.4 | 3,190.5 | 6.3 | 6.7 | 58.81 | -150.7 | -157.1 | 82.5 | 70.4 | 12.15 | 6.791 | |
| 3,300.0 | 3,295.0 | 3,298.3 | 3,290.2 | 6.5 | 6.9 | 58.86 | -156.2 | -162.5 | 85.1 | 72.6 | 12.54 | 6.787 | |
| 3,400.0 | 3,394.8 | 3,398.3 | 3,389.8 | 6.7 | 7.1 | 58.91 | -161.6 | -167.8 | 87.7 | 74.8 | 12.93 | 6.782 | |
| 3,500.0 | 3,494.7 | 3,498.3 | 3,489.5 | 6.9 | 7.4 | 58.96 | -167.0 | -173.2 | 90.3 | 77.0 | 13.33 | 6.778 | |
| 3,600.0 | 3,594.5 | 3,598.2 | 3,589.2 | 7.1 | 7.6 | 59.00 | -172.4 | -178.6 | 92.9 | 79.2 | 13.72 | 6.775 | |
| 3,700.0 | 3,694.3 | 3,698.2 | 3,688.9 | 7.3 | 7.8 | 59.04 | -177.8 | -183.9 | 95.6 | 81.4 | 14.11 | 6.771 | |
| 3,800.0 | 3,794.1 | 3,798.2 | 3,788.5 | 7.5 | 8.0 | 59.08 | -183.3 | -189.3 | 98.2 | 83.7 | 14.51 | 6.767 | |
| 3,900.0 | 3,893.9 | 3,898.1 | 3,888.2 | 7.7 | 8.2 | 59.12 | -188.7 | -194.6 | 100.8 | 85.9 | 14.90 | 6.764 | |
| 4,000.0 | 3,993.8 | 3,998.1 | 3,987.9 | 7.9 | 8.5 | 59.16 | -194.1 | -200.0 | 103.4 | 88.1 | 15.29 | 6.761 | |
| 4,100.0 | 4,093.6 | 4,098.1 | 4,087.6 | 8.1 | 8.7 | 59.19 | -199.5 | -205.3 | 106.0 | 90.3 | 15.69 | 6.758 | |
| 4,200.0 | 4,193.4 | 4,198.0 | 4,187.2 | 8.3 | 8.9 | 59.22 | -204.9 | -210.7 | 108.6 | 92.5 | 16.08 | 6.755 | |
| 4,300.0 | 4,293.2 | 4,298.0 | 4,286.9 | 8.5 | 9.1 | 59.25 | -210.4 | -216.0 | 111.2 | 94.8 | 16.47 | 6.752 | |
| 4,400.0 | 4,393.0 | 4,398.0 | 4,386.6 | 8.7 | 9.3 | 59.28 | -215.8 | -221.4 | 113.8 | 97.0 | 16.87 | 6.750 | |
| 4,500.0 | 4,492.9 | 4,497.9 | 4,486.3 | 8.9 | 9.5 | 59.31 | -221.2 | -226.7 | 116.5 | 99.2 | 17.26 | 6.747 | |
| 4,600.0 | 4,592.7 | 4,597.9 | 4,585.9 | 9.1 | 9.8 | 59.33 | -226.6 | -232.1 | 119.1 | 101.4 | 17.65 | 6.745 | |
| 4,700.0 | 4,692.5 | 4,697.9 | 4,685.6 | 9.3 | 10.0 | 59.36 | -232.0 | -237.4 | 121.7 | 103.6 | 18.05 | 6.743 | |
| 4,800.0 | 4,792.3 | 4,797.8 | 4,785.3 | 9.5 | 10.2 | 59.38 | -237.5 | -242.8 | 124.3 | 105.8 | 18.44 | 6.741 | |
| 4,900.0 | 4,892.1 | 4,897.8 | 4,885.0 | 9.7 | 10.4 | 59.41 | -242.9 | -248.1 | 126.9 | 108.1 | 18.83 | 6.738 | |
| 5,000.0 | 4,992.0 | 4,997.7 | 4,984.6 | 9.9 | 10.6 | 59.43 | -248.3 | -253.5 | 129.5 | 110.3 | 19.23 | 6.736 | |
| 5,100.0 | 5,091.8 | 5,097.7 | 5,084.3 | 10.1 | 10.9 | 59.45 | -253.7 | -258.9 | 132.1 | 112.5 | 19.62 | 6.734 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3A-22H-M268 - Hz - Plan #1

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,200.0 | 5,191.6 | 5,197.7 | 5,184.0 | 10.3 | 11.1 | 59.47 | -259.1 | -264.2 | 134.7 | 114.7 | 20.01 | 6.733 | |
| 5,300.0 | 5,291.4 | 5,297.6 | 5,283.7 | 10.5 | 11.3 | 59.49 | -264.6 | -269.6 | 137.3 | 116.9 | 20.41 | 6.731 | |
| 5,400.0 | 5,391.2 | 5,397.6 | 5,383.3 | 10.7 | 11.5 | 59.51 | -270.0 | -274.9 | 140.0 | 119.2 | 20.80 | 6.729 | |
| 5,500.0 | 5,491.1 | 5,497.6 | 5,483.0 | 10.9 | 11.7 | 59.53 | -275.4 | -280.3 | 142.6 | 121.4 | 21.19 | 6.727 | |
| 5,600.0 | 5,590.9 | 5,597.5 | 5,582.7 | 11.1 | 12.0 | 59.55 | -280.8 | -285.6 | 145.2 | 123.6 | 21.59 | 6.726 | |
| 5,700.0 | 5,690.7 | 5,697.5 | 5,682.4 | 11.3 | 12.2 | 59.56 | -286.2 | -291.0 | 147.8 | 125.8 | 21.98 | 6.724 | |
| 5,800.0 | 5,790.5 | 5,797.5 | 5,782.0 | 11.5 | 12.4 | 59.58 | -291.7 | -296.3 | 150.4 | 128.0 | 22.37 | 6.723 | |
| 5,900.0 | 5,890.3 | 5,897.4 | 5,881.7 | 11.7 | 12.6 | 59.59 | -297.1 | -301.7 | 153.0 | 130.3 | 22.77 | 6.721 | |
| 6,000.0 | 5,990.2 | 5,997.4 | 5,981.4 | 11.9 | 12.8 | 59.61 | -302.5 | -307.0 | 155.6 | 132.5 | 23.16 | 6.720 | |
| 6,100.0 | 6,090.0 | 6,097.4 | 6,081.1 | 12.2 | 13.1 | 59.62 | -307.9 | -312.4 | 158.2 | 134.7 | 23.55 | 6.718 | |
| 6,200.0 | 6,189.8 | 6,197.3 | 6,180.7 | 12.4 | 13.3 | 59.64 | -313.4 | -317.7 | 160.9 | 136.9 | 23.95 | 6.717 | |
| 6,300.0 | 6,289.6 | 6,297.3 | 6,280.4 | 12.6 | 13.5 | 59.65 | -318.8 | -323.1 | 163.5 | 139.1 | 24.34 | 6.716 | |
| 6,400.0 | 6,389.4 | 6,397.3 | 6,380.1 | 12.8 | 13.7 | 59.67 | -324.2 | -328.5 | 166.1 | 141.3 | 24.73 | 6.715 | |
| 6,500.0 | 6,489.3 | 6,497.2 | 6,479.8 | 13.0 | 13.9 | 59.68 | -329.6 | -333.8 | 168.7 | 143.6 | 25.13 | 6.713 | |
| 6,600.0 | 6,589.1 | 6,597.2 | 6,579.4 | 13.2 | 14.2 | 59.69 | -335.0 | -339.2 | 171.3 | 145.8 | 25.52 | 6.712 | |
| 6,700.0 | 6,688.9 | 6,697.2 | 6,679.1 | 13.4 | 14.4 | 59.70 | -340.5 | -344.5 | 173.9 | 148.0 | 25.91 | 6.711 | |
| 6,800.0 | 6,788.7 | 6,797.4 | 6,779.1 | 13.6 | 14.6 | 60.00 | -345.0 | -349.9 | 176.5 | 150.2 | 26.32 | 6.707 | |
| 6,900.0 | 6,888.6 | 6,896.1 | 6,877.2 | 13.8 | 14.7 | 64.46 | -336.4 | -355.4 | 179.3 | 152.4 | 26.89 | 6.668 | |
| 7,000.0 | 6,988.4 | 6,987.8 | 6,965.6 | 14.0 | 14.7 | 45.05 | -313.5 | -360.6 | 185.8 | 158.3 | 27.57 | 6.742 | |
| 7,100.0 | 7,088.0 | 7,073.6 | 7,044.2 | 14.1 | 14.6 | -60.15 | -279.4 | -365.5 | 198.3 | 170.4 | 27.91 | 7.104 | |
| 7,200.0 | 7,184.9 | 7,156.0 | 7,114.0 | 14.0 | 14.5 | -57.65 | -236.1 | -370.1 | 214.2 | 186.5 | 27.70 | 7.731 | |
| 7,300.0 | 7,276.2 | 7,235.7 | 7,175.0 | 13.9 | 14.4 | -53.13 | -185.0 | -374.3 | 231.4 | 204.4 | 26.98 | 8.577 | |
| 7,400.0 | 7,359.0 | 7,313.3 | 7,226.9 | 13.8 | 14.4 | -49.18 | -127.5 | -378.2 | 248.3 | 222.4 | 25.87 | 9.596 | |
| 7,500.0 | 7,430.9 | 7,389.3 | 7,269.9 | 13.7 | 14.5 | -46.09 | -65.0 | -381.6 | 263.6 | 239.0 | 24.58 | 10.724 | |
| 7,600.0 | 7,489.7 | 7,464.1 | 7,303.7 | 13.7 | 14.6 | -43.84 | 1.6 | -384.6 | 276.5 | 253.1 | 23.38 | 11.827 | |
| 7,700.0 | 7,533.6 | 7,538.0 | 7,328.3 | 13.8 | 14.8 | -42.35 | 71.1 | -387.2 | 286.4 | 263.9 | 22.52 | 12.719 | |
| 7,800.0 | 7,561.3 | 7,611.3 | 7,343.7 | 14.2 | 15.1 | -41.54 | 142.8 | -389.3 | 292.9 | 270.6 | 22.31 | 13.127 | |
| 7,900.0 | 7,571.9 | 7,684.4 | 7,349.9 | 14.8 | 15.5 | -41.37 | 215.6 | -390.9 | 295.8 | 272.9 | 22.95 | 12.892 | |
| 8,000.0 | 7,572.0 | 7,780.1 | 7,350.0 | 15.5 | 16.2 | -41.61 | 311.2 | -392.6 | 296.9 | 272.9 | 24.07 | 12.338 | |
| 8,100.0 | 7,572.0 | 7,880.1 | 7,350.0 | 16.4 | 17.1 | -41.86 | 411.2 | -394.3 | 298.1 | 272.7 | 25.36 | 11.753 | |
| 8,200.0 | 7,572.0 | 7,980.1 | 7,350.0 | 17.4 | 18.1 | -42.11 | 511.1 | -396.1 | 299.3 | 272.4 | 26.82 | 11.158 | |
| 8,300.0 | 7,572.0 | 8,080.0 | 7,350.0 | 18.6 | 19.2 | -42.36 | 611.1 | -397.8 | 300.4 | 272.0 | 28.42 | 10.571 | |
| 8,400.0 | 7,572.0 | 8,180.0 | 7,350.0 | 19.8 | 20.3 | -42.60 | 711.1 | -399.5 | 301.6 | 271.5 | 30.15 | 10.005 | |
| 8,500.0 | 7,572.0 | 8,280.0 | 7,350.0 | 21.1 | 21.6 | -42.84 | 811.0 | -401.3 | 302.8 | 270.8 | 31.98 | 9.468 | |
| 8,600.0 | 7,572.0 | 8,380.0 | 7,350.0 | 22.4 | 22.9 | -43.08 | 911.0 | -403.0 | 304.0 | 270.1 | 33.91 | 8.964 | |
| 8,700.0 | 7,572.0 | 8,480.0 | 7,350.0 | 23.9 | 24.3 | -43.32 | 1,011.0 | -404.8 | 305.2 | 269.3 | 35.93 | 8.495 | |
| 8,800.0 | 7,572.0 | 8,580.0 | 7,350.0 | 25.3 | 25.8 | -43.56 | 1,110.9 | -406.5 | 306.4 | 268.4 | 38.02 | 8.059 | |
| 8,900.0 | 7,572.0 | 8,680.0 | 7,350.0 | 26.8 | 27.2 | -43.80 | 1,210.9 | -408.3 | 307.6 | 267.4 | 40.17 | 7.657 | |
| 9,000.0 | 7,572.0 | 8,779.9 | 7,350.0 | 28.3 | 28.7 | -44.03 | 1,310.9 | -410.0 | 308.8 | 266.4 | 42.39 | 7.285 | |
| 9,100.0 | 7,572.0 | 8,879.9 | 7,350.0 | 29.9 | 30.3 | -44.26 | 1,410.9 | -411.8 | 310.0 | 265.4 | 44.65 | 6.943 | |
| 9,200.0 | 7,572.0 | 8,979.9 | 7,350.0 | 31.4 | 31.8 | -44.49 | 1,510.8 | -413.5 | 311.2 | 264.3 | 46.97 | 6.626 | |
| 9,300.0 | 7,572.0 | 9,079.9 | 7,350.0 | 33.0 | 33.4 | -44.72 | 1,610.8 | -415.2 | 312.5 | 263.1 | 49.33 | 6.334 | |
| 9,400.0 | 7,572.0 | 9,179.9 | 7,350.0 | 34.6 | 35.0 | -44.95 | 1,710.8 | -417.0 | 313.7 | 262.0 | 51.74 | 6.063 | |
| 9,500.0 | 7,572.0 | 9,279.9 | 7,350.0 | 36.2 | 36.6 | -45.17 | 1,810.7 | -418.7 | 314.9 | 260.7 | 54.18 | 5.813 | |
| 9,600.0 | 7,572.0 | 9,379.8 | 7,350.0 | 37.9 | 38.2 | -45.39 | 1,910.7 | -420.5 | 316.2 | 259.5 | 56.65 | 5.581 | |
| 9,700.0 | 7,572.0 | 9,479.8 | 7,350.0 | 39.5 | 39.8 | -45.62 | 2,010.7 | -422.2 | 317.4 | 258.3 | 59.16 | 5.365 | |
| 9,800.0 | 7,572.0 | 9,579.8 | 7,350.0 | 41.2 | 41.5 | -45.84 | 2,110.6 | -424.0 | 318.7 | 257.0 | 61.70 | 5.165 | |
| 9,900.0 | 7,572.0 | 9,679.8 | 7,350.0 | 42.8 | 43.1 | -46.05 | 2,210.6 | -425.7 | 319.9 | 255.6 | 64.27 | 4.978 | |
| 10,000.0 | 7,572.0 | 9,779.8 | 7,350.0 | 44.5 | 44.8 | -46.27 | 2,310.6 | -427.5 | 321.2 | 254.3 | 66.86 | 4.804 | |
| 10,100.0 | 7,572.0 | 9,879.8 | 7,350.0 | 46.2 | 46.4 | -46.48 | 2,410.5 | -429.2 | 322.4 | 253.0 | 69.48 | 4.641 | |
| 10,200.0 | 7,572.0 | 9,979.8 | 7,350.0 | 47.8 | 48.1 | -46.70 | 2,510.5 | -431.0 | 323.7 | 251.6 | 72.12 | 4.488 | |
| 10,300.0 | 7,572.0 | 10,079.7 | 7,350.0 | 49.5 | 49.8 | -46.91 | 2,610.5 | -432.7 | 325.0 | 250.2 | 74.79 | 4.345 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3A-22H-M268 - Hz - Plan #1

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,400.0 | 7,572.0 | 10,179.7 | 7,350.0 | 51.2 | 51.4 | -47.12 | 2,710.5 | -434.4 | 326.3 | 248.8 | 77.48 | 4.211 | |
| 10,500.0 | 7,572.0 | 10,279.7 | 7,350.0 | 52.9 | 53.1 | -47.32 | 2,810.4 | -436.2 | 327.5 | 247.3 | 80.19 | 4.084 | |
| 10,600.0 | 7,572.0 | 10,379.7 | 7,350.0 | 54.6 | 54.8 | -47.53 | 2,910.4 | -437.9 | 328.8 | 245.9 | 82.93 | 3.965 | |
| 10,700.0 | 7,572.0 | 10,479.7 | 7,350.0 | 56.3 | 56.5 | -47.74 | 3,010.4 | -439.7 | 330.1 | 244.4 | 85.68 | 3.853 | |
| 10,800.0 | 7,572.0 | 10,579.7 | 7,350.0 | 58.0 | 58.2 | -47.94 | 3,110.3 | -441.4 | 331.4 | 243.0 | 88.45 | 3.747 | |
| 10,900.0 | 7,572.0 | 10,679.6 | 7,350.0 | 59.7 | 59.9 | -48.14 | 3,210.3 | -443.2 | 332.7 | 241.5 | 91.24 | 3.647 | |
| 11,000.0 | 7,572.0 | 10,779.6 | 7,350.0 | 61.4 | 61.6 | -48.34 | 3,310.3 | -444.9 | 334.0 | 240.0 | 94.04 | 3.552 | |
| 11,100.0 | 7,572.0 | 10,879.6 | 7,350.0 | 63.1 | 63.3 | -48.54 | 3,410.2 | -446.7 | 335.3 | 238.4 | 96.87 | 3.462 | |
| 11,200.0 | 7,572.0 | 10,979.6 | 7,350.0 | 64.8 | 65.0 | -48.73 | 3,510.2 | -448.4 | 336.6 | 236.9 | 99.71 | 3.376 | |
| 11,300.0 | 7,572.0 | 11,079.6 | 7,350.0 | 66.6 | 66.7 | -48.93 | 3,610.2 | -450.1 | 337.9 | 235.4 | 102.56 | 3.295 | |
| 11,400.0 | 7,572.0 | 11,179.6 | 7,350.0 | 68.3 | 68.5 | -49.12 | 3,710.2 | -451.9 | 339.3 | 233.8 | 105.43 | 3.218 | |
| 11,500.0 | 7,572.0 | 11,279.6 | 7,350.0 | 70.0 | 70.2 | -49.31 | 3,810.1 | -453.6 | 340.6 | 232.3 | 108.32 | 3.144 | |
| 11,600.0 | 7,572.0 | 11,379.5 | 7,350.0 | 71.7 | 71.9 | -49.51 | 3,910.1 | -455.4 | 341.9 | 230.7 | 111.22 | 3.074 | |
| 11,700.0 | 7,572.0 | 11,479.5 | 7,350.0 | 73.4 | 73.6 | -49.69 | 4,010.1 | -457.1 | 343.2 | 229.1 | 114.13 | 3.007 | |
| 11,800.0 | 7,572.0 | 11,579.5 | 7,350.0 | 75.2 | 75.3 | -49.88 | 4,110.0 | -458.9 | 344.6 | 227.5 | 117.06 | 2.943 | |
| 11,900.0 | 7,572.0 | 11,679.5 | 7,350.0 | 76.9 | 77.0 | -50.02 | 4,210.0 | -460.6 | 345.5 | 225.5 | 120.01 | 2.879 | |
| 12,000.0 | 7,572.0 | 11,779.5 | 7,350.0 | 78.6 | 78.8 | -49.97 | 4,310.0 | -462.4 | 345.2 | 222.5 | 122.68 | 2.814 | |
| 12,100.0 | 7,572.0 | 11,879.5 | 7,350.0 | 80.3 | 80.5 | -49.73 | 4,409.9 | -464.1 | 343.5 | 218.6 | 124.97 | 2.749 | |
| 12,200.0 | 7,572.0 | 11,979.4 | 7,350.0 | 82.1 | 82.2 | -49.29 | 4,509.9 | -465.8 | 340.6 | 213.7 | 126.86 | 2.685 | |
| 12,300.0 | 7,572.0 | 12,079.3 | 7,350.0 | 83.8 | 83.9 | -48.71 | 4,609.7 | -467.6 | 336.7 | 208.2 | 128.45 | 2.621 | |
| 12,400.0 | 7,572.0 | 12,179.1 | 7,350.0 | 85.5 | 85.7 | -48.11 | 4,709.6 | -469.3 | 332.8 | 202.8 | 129.96 | 2.560 | |
| 12,500.0 | 7,572.0 | 12,279.0 | 7,350.0 | 87.3 | 87.4 | -47.50 | 4,809.4 | -471.1 | 328.9 | 197.5 | 131.38 | 2.503 | |
| 12,600.0 | 7,572.0 | 12,378.9 | 7,350.0 | 89.0 | 89.1 | -46.88 | 4,909.2 | -472.8 | 325.0 | 192.3 | 132.72 | 2.449 | |
| 12,700.0 | 7,572.0 | 12,478.7 | 7,350.0 | 90.7 | 90.9 | -46.24 | 5,009.1 | -474.6 | 321.2 | 187.3 | 133.96 | 2.398 | |
| 12,800.0 | 7,572.0 | 12,578.6 | 7,350.0 | 92.5 | 92.6 | -45.59 | 5,108.9 | -476.3 | 317.5 | 182.4 | 135.10 | 2.350 | |
| 12,900.0 | 7,572.0 | 12,678.4 | 7,350.0 | 94.2 | 94.3 | -44.92 | 5,208.8 | -478.0 | 313.7 | 177.6 | 136.15 | 2.304 | |
| 13,000.0 | 7,572.0 | 12,778.3 | 7,350.0 | 96.0 | 96.0 | -44.24 | 5,308.6 | -479.8 | 310.1 | 173.0 | 137.08 | 2.262 | |
| 13,100.0 | 7,572.0 | 12,878.2 | 7,350.0 | 97.7 | 97.8 | -43.54 | 5,408.5 | -481.5 | 306.4 | 168.5 | 137.91 | 2.222 | |
| 13,200.0 | 7,572.0 | 12,978.0 | 7,350.0 | 99.4 | 99.5 | -42.82 | 5,508.3 | -483.3 | 302.9 | 164.2 | 138.61 | 2.185 | |
| 13,300.0 | 7,572.0 | 13,077.9 | 7,350.0 | 101.2 | 101.2 | -42.09 | 5,608.2 | -485.0 | 299.3 | 160.1 | 139.20 | 2.150 | |
| 13,400.0 | 7,572.0 | 13,177.8 | 7,350.0 | 102.9 | 103.0 | -41.33 | 5,708.0 | -486.8 | 295.8 | 156.2 | 139.66 | 2.118 | |
| 13,500.0 | 7,572.0 | 13,277.6 | 7,350.0 | 104.7 | 104.7 | -40.56 | 5,807.9 | -488.5 | 292.4 | 152.4 | 139.99 | 2.089 | |
| 13,600.0 | 7,572.0 | 13,377.5 | 7,350.0 | 106.4 | 106.5 | -39.78 | 5,907.7 | -490.2 | 289.0 | 148.8 | 140.18 | 2.062 | |
| 13,700.0 | 7,572.0 | 13,477.3 | 7,350.0 | 108.1 | 108.2 | -38.97 | 6,007.6 | -492.0 | 285.7 | 145.5 | 140.23 | 2.037 | |
| 13,800.0 | 7,572.0 | 13,577.2 | 7,350.0 | 109.9 | 109.9 | -38.15 | 6,107.4 | -493.7 | 282.4 | 142.3 | 140.13 | 2.016 | |
| 13,900.0 | 7,572.0 | 13,677.1 | 7,350.0 | 111.6 | 111.7 | -37.30 | 6,207.3 | -495.5 | 279.2 | 139.4 | 139.88 | 1.996 | |
| 14,000.0 | 7,572.0 | 13,776.9 | 7,350.0 | 113.4 | 113.4 | -36.44 | 6,307.1 | -497.2 | 276.1 | 136.6 | 139.46 | 1.980 | |
| 14,100.0 | 7,572.0 | 13,876.8 | 7,350.0 | 115.1 | 115.1 | -35.56 | 6,407.0 | -499.0 | 273.0 | 134.1 | 138.89 | 1.966 | |
| 14,200.0 | 7,572.0 | 13,976.7 | 7,350.0 | 116.9 | 116.9 | -34.65 | 6,506.8 | -500.7 | 270.0 | 131.9 | 138.14 | 1.955 | |
| 14,300.0 | 7,572.0 | 14,076.5 | 7,350.0 | 118.6 | 118.6 | -33.73 | 6,606.7 | -502.4 | 267.0 | 129.8 | 137.22 | 1.946 | |
| 14,400.0 | 7,572.0 | 14,176.4 | 7,350.0 | 120.3 | 120.4 | -32.79 | 6,706.5 | -504.2 | 264.2 | 128.1 | 136.11 | 1.941 | |
| 14,500.0 | 7,572.0 | 14,276.3 | 7,350.0 | 122.1 | 122.1 | -31.88 | 6,806.4 | -505.9 | 261.5 | 126.4 | 135.04 | 1.936 | |
| 14,549.8 | 7,572.0 | 14,326.0 | 7,350.0 | 123.0 | 123.0 | -31.73 | 6,856.1 | -506.8 | 261.0 | 125.6 | 135.40 | 1.928 | |
| 14,600.0 | 7,572.0 | 14,376.2 | 7,350.0 | 123.8 | 123.8 | -31.88 | 6,906.3 | -507.7 | 261.5 | 124.9 | 136.62 | 1.914 | |
| 14,700.0 | 7,572.0 | 14,476.0 | 7,350.0 | 125.6 | 125.6 | -33.05 | 7,006.0 | -509.4 | 265.3 | 123.8 | 141.52 | 1.875 | |
| 14,800.0 | 7,572.0 | 14,574.9 | 7,350.0 | 127.3 | 127.3 | -35.25 | 7,105.0 | -511.1 | 273.3 | 124.1 | 149.17 | 1.832 | |
| 14,900.0 | 7,572.0 | 14,672.7 | 7,350.0 | 129.0 | 129.0 | -38.25 | 7,202.7 | -512.9 | 286.1 | 127.7 | 158.44 | 1.806 | SF |
| 15,000.0 | 7,572.0 | 14,768.6 | 7,350.0 | 130.6 | 130.7 | -41.73 | 7,298.7 | -514.5 | 304.6 | 136.7 | 167.90 | 1.814 | |
| 15,100.0 | 7,572.0 | 14,862.4 | 7,350.0 | 132.2 | 132.3 | -45.38 | 7,392.4 | -516.2 | 329.3 | 153.1 | 176.20 | 1.869 | |
| 15,200.0 | 7,572.0 | 14,953.5 | 7,350.0 | 133.8 | 133.9 | -48.94 | 7,483.5 | -517.8 | 360.8 | 178.5 | 182.33 | 1.979 | |
| 15,300.0 | 7,572.0 | 15,041.4 | 7,350.0 | 135.4 | 135.4 | -52.20 | 7,571.4 | -519.3 | 399.5 | 213.7 | 185.77 | 2.150 | |
| 15,333.5 | 7,572.0 | 15,070.1 | 7,350.0 | 135.9 | 135.9 | -53.21 | 7,600.1 | -519.8 | 414.0 | 227.7 | 186.29 | 2.222 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3C-22H-M268 - Hz - Plan #1

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 90.05 | 0.0 | 11.3 | 11.3 | | | | |
| 100.0 | 100.0 | 101.0 | 101.0 | 0.1 | 0.1 | 90.05 | 0.0 | 11.3 | 11.3 | 11.1 | 0.26 | 42.950 | |
| 200.0 | 200.0 | 201.0 | 201.0 | 0.3 | 0.3 | 90.05 | 0.0 | 11.3 | 11.3 | 10.7 | 0.61 | 18.477 | |
| 300.0 | 300.0 | 301.0 | 301.0 | 0.5 | 0.5 | 90.05 | 0.0 | 11.3 | 11.3 | 10.4 | 0.96 | 11.770 | CC, ES |
| 400.0 | 400.0 | 401.0 | 401.0 | 0.7 | 0.7 | -121.02 | 0.0 | 11.3 | 11.7 | 10.4 | 1.31 | 8.957 | |
| 500.0 | 500.0 | 501.0 | 501.0 | 0.8 | 0.8 | -130.73 | 0.0 | 11.3 | 13.3 | 11.6 | 1.66 | 7.991 | |
| 600.0 | 599.9 | 600.9 | 600.9 | 1.0 | 1.0 | -142.29 | 0.0 | 11.3 | 16.5 | 14.5 | 2.01 | 8.176 | |
| 700.0 | 699.7 | 700.8 | 700.8 | 1.2 | 1.2 | -149.53 | -0.8 | 11.7 | 21.2 | 18.8 | 2.37 | 8.967 | |
| 800.0 | 799.5 | 800.7 | 800.7 | 1.4 | 1.4 | -150.52 | -3.3 | 12.7 | 25.9 | 23.2 | 2.72 | 9.530 | |
| 900.0 | 899.3 | 900.7 | 900.6 | 1.6 | 1.5 | -147.97 | -7.3 | 14.3 | 30.4 | 27.3 | 3.09 | 9.839 | |
| 1,000.0 | 999.2 | 1,000.6 | 1,000.3 | 1.8 | 1.7 | -143.60 | -12.7 | 16.6 | 34.7 | 31.3 | 3.46 | 10.024 | |
| 1,100.0 | 1,099.0 | 1,100.5 | 1,100.0 | 2.0 | 1.9 | -139.93 | -18.3 | 18.9 | 39.2 | 35.4 | 3.85 | 10.197 | |
| 1,200.0 | 1,198.8 | 1,200.3 | 1,199.7 | 2.2 | 2.1 | -137.02 | -23.9 | 21.3 | 43.9 | 39.6 | 4.23 | 10.360 | |
| 1,300.0 | 1,298.6 | 1,300.2 | 1,299.4 | 2.4 | 2.3 | -134.67 | -29.5 | 23.6 | 48.6 | 44.0 | 4.62 | 10.509 | |
| 1,400.0 | 1,398.4 | 1,400.1 | 1,399.0 | 2.6 | 2.5 | -132.74 | -35.1 | 25.9 | 53.4 | 48.4 | 5.01 | 10.644 | |
| 1,500.0 | 1,498.3 | 1,500.0 | 1,498.7 | 2.8 | 2.7 | -131.13 | -40.8 | 28.3 | 58.2 | 52.8 | 5.41 | 10.767 | |
| 1,600.0 | 1,598.1 | 1,599.8 | 1,598.4 | 3.0 | 2.9 | -129.77 | -46.4 | 30.6 | 63.1 | 57.3 | 5.80 | 10.878 | |
| 1,700.0 | 1,697.9 | 1,699.7 | 1,698.1 | 3.2 | 3.1 | -128.61 | -52.0 | 32.9 | 68.0 | 61.8 | 6.19 | 10.978 | |
| 1,800.0 | 1,797.7 | 1,799.6 | 1,797.8 | 3.4 | 3.3 | -127.60 | -57.6 | 35.3 | 72.9 | 66.4 | 6.59 | 11.070 | |
| 1,900.0 | 1,897.5 | 1,899.4 | 1,897.5 | 3.6 | 3.5 | -126.72 | -63.2 | 37.6 | 77.9 | 70.9 | 6.98 | 11.153 | |
| 2,000.0 | 1,997.4 | 1,999.3 | 1,997.2 | 3.8 | 3.7 | -125.94 | -68.8 | 39.9 | 82.9 | 75.5 | 7.38 | 11.228 | |
| 2,100.0 | 2,097.2 | 2,099.2 | 2,096.8 | 4.0 | 3.9 | -125.25 | -74.4 | 42.2 | 87.9 | 80.1 | 7.78 | 11.298 | |
| 2,200.0 | 2,197.0 | 2,199.1 | 2,196.5 | 4.2 | 4.1 | -124.64 | -80.0 | 44.6 | 92.8 | 84.7 | 8.17 | 11.362 | |
| 2,300.0 | 2,296.8 | 2,298.9 | 2,296.2 | 4.4 | 4.3 | -124.09 | -85.6 | 46.9 | 97.9 | 89.3 | 8.57 | 11.420 | |
| 2,400.0 | 2,396.6 | 2,398.8 | 2,395.9 | 4.6 | 4.5 | -123.59 | -91.2 | 49.2 | 102.9 | 93.9 | 8.96 | 11.474 | |
| 2,500.0 | 2,496.5 | 2,498.7 | 2,495.6 | 4.8 | 4.7 | -123.14 | -96.8 | 51.6 | 107.9 | 98.5 | 9.36 | 11.525 | |
| 2,600.0 | 2,596.3 | 2,598.5 | 2,595.3 | 5.0 | 4.9 | -122.73 | -102.4 | 53.9 | 112.9 | 103.2 | 9.76 | 11.571 | |
| 2,700.0 | 2,696.1 | 2,698.4 | 2,694.9 | 5.2 | 5.1 | -122.36 | -108.0 | 56.2 | 117.9 | 107.8 | 10.15 | 11.615 | |
| 2,800.0 | 2,795.9 | 2,798.3 | 2,794.6 | 5.4 | 5.3 | -122.01 | -113.7 | 58.6 | 123.0 | 112.4 | 10.55 | 11.655 | |
| 2,900.0 | 2,895.7 | 2,898.1 | 2,894.3 | 5.6 | 5.5 | -121.69 | -119.3 | 60.9 | 128.0 | 117.1 | 10.95 | 11.693 | |
| 3,000.0 | 2,995.6 | 2,998.0 | 2,994.0 | 5.8 | 5.7 | -121.40 | -124.9 | 63.2 | 133.1 | 121.7 | 11.35 | 11.729 | |
| 3,100.0 | 3,095.4 | 3,097.9 | 3,093.7 | 6.1 | 5.9 | -121.13 | -130.5 | 65.6 | 138.1 | 126.4 | 11.74 | 11.762 | |
| 3,200.0 | 3,195.2 | 3,197.8 | 3,193.4 | 6.3 | 6.1 | -120.87 | -136.1 | 67.9 | 143.2 | 131.0 | 12.14 | 11.793 | |
| 3,300.0 | 3,295.0 | 3,297.6 | 3,293.1 | 6.5 | 6.3 | -120.64 | -141.7 | 70.2 | 148.2 | 135.7 | 12.54 | 11.823 | |
| 3,400.0 | 3,394.8 | 3,397.5 | 3,392.7 | 6.7 | 6.5 | -120.42 | -147.3 | 72.6 | 153.3 | 140.3 | 12.93 | 11.851 | |
| 3,500.0 | 3,494.7 | 3,497.4 | 3,492.4 | 6.9 | 6.7 | -120.21 | -152.9 | 74.9 | 158.3 | 145.0 | 13.33 | 11.877 | |
| 3,600.0 | 3,594.5 | 3,597.2 | 3,592.1 | 7.1 | 6.9 | -120.02 | -158.5 | 77.2 | 163.4 | 149.7 | 13.73 | 11.902 | |
| 3,700.0 | 3,694.3 | 3,697.1 | 3,691.8 | 7.3 | 7.1 | -119.84 | -164.1 | 79.5 | 168.4 | 154.3 | 14.13 | 11.925 | |
| 3,800.0 | 3,794.1 | 3,797.0 | 3,791.5 | 7.5 | 7.3 | -119.67 | -169.7 | 81.9 | 173.5 | 159.0 | 14.52 | 11.948 | |
| 3,900.0 | 3,893.9 | 3,896.8 | 3,891.2 | 7.7 | 7.5 | -119.50 | -175.3 | 84.2 | 178.6 | 163.7 | 14.92 | 11.969 | |
| 4,000.0 | 3,993.8 | 3,996.7 | 3,990.9 | 7.9 | 7.8 | -119.35 | -180.9 | 86.5 | 183.6 | 168.3 | 15.32 | 11.989 | |
| 4,100.0 | 4,093.6 | 4,096.6 | 4,090.5 | 8.1 | 8.0 | -119.21 | -186.6 | 88.9 | 188.7 | 173.0 | 15.71 | 12.009 | |
| 4,200.0 | 4,193.4 | 4,196.5 | 4,190.2 | 8.3 | 8.2 | -119.07 | -192.2 | 91.2 | 193.8 | 177.7 | 16.11 | 12.027 | |
| 4,300.0 | 4,293.2 | 4,296.3 | 4,289.9 | 8.5 | 8.4 | -118.94 | -197.8 | 93.5 | 198.8 | 182.3 | 16.51 | 12.044 | |
| 4,400.0 | 4,393.0 | 4,396.2 | 4,389.6 | 8.7 | 8.6 | -118.82 | -203.4 | 95.9 | 203.9 | 187.0 | 16.91 | 12.061 | |
| 4,500.0 | 4,492.9 | 4,496.1 | 4,489.3 | 8.9 | 8.8 | -118.70 | -209.0 | 98.2 | 209.0 | 191.7 | 17.30 | 12.077 | |
| 4,600.0 | 4,592.7 | 4,595.9 | 4,589.0 | 9.1 | 9.0 | -118.59 | -214.6 | 100.5 | 214.0 | 196.3 | 17.70 | 12.093 | |
| 4,700.0 | 4,692.5 | 4,695.8 | 4,688.7 | 9.3 | 9.2 | -118.48 | -220.2 | 102.9 | 219.1 | 201.0 | 18.10 | 12.107 | |
| 4,800.0 | 4,792.3 | 4,795.7 | 4,788.3 | 9.5 | 9.4 | -118.38 | -225.8 | 105.2 | 224.2 | 205.7 | 18.50 | 12.122 | |
| 4,900.0 | 4,892.1 | 4,895.6 | 4,888.0 | 9.7 | 9.6 | -118.28 | -231.4 | 107.5 | 229.3 | 210.4 | 18.89 | 12.135 | |
| 5,000.0 | 4,992.0 | 4,995.4 | 4,987.7 | 9.9 | 9.8 | -118.19 | -237.0 | 109.8 | 234.3 | 215.1 | 19.29 | 12.148 | |
| 5,100.0 | 5,091.8 | 5,095.3 | 5,087.4 | 10.1 | 10.0 | -118.10 | -242.6 | 112.2 | 239.4 | 219.7 | 19.69 | 12.161 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3C-22H-M268 - Hz - Plan #1

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,200.0 | 5,191.6 | 5,195.2 | 5,187.1 | 10.3 | 10.2 | -118.01 | -248.2 | 114.5 | 244.5 | 224.4 | 20.08 | 12.173 | |
| 5,300.0 | 5,291.4 | 5,295.0 | 5,286.8 | 10.5 | 10.4 | -117.93 | -253.8 | 116.8 | 249.6 | 229.1 | 20.48 | 12.184 | |
| 5,400.0 | 5,391.2 | 5,394.9 | 5,386.5 | 10.7 | 10.6 | -117.85 | -259.4 | 119.2 | 254.6 | 233.8 | 20.88 | 12.196 | |
| 5,500.0 | 5,491.1 | 5,494.8 | 5,486.1 | 10.9 | 10.8 | -117.78 | -265.1 | 121.5 | 259.7 | 238.4 | 21.28 | 12.206 | |
| 5,600.0 | 5,590.9 | 5,594.6 | 5,585.8 | 11.1 | 11.0 | -117.71 | -270.7 | 123.8 | 264.8 | 243.1 | 21.67 | 12.217 | |
| 5,700.0 | 5,690.7 | 5,694.5 | 5,685.5 | 11.3 | 11.2 | -117.64 | -276.3 | 126.2 | 269.9 | 247.8 | 22.07 | 12.227 | |
| 5,800.0 | 5,790.5 | 5,794.4 | 5,785.2 | 11.5 | 11.4 | -117.57 | -281.9 | 128.5 | 275.0 | 252.5 | 22.47 | 12.237 | |
| 5,900.0 | 5,890.3 | 5,894.3 | 5,884.9 | 11.7 | 11.6 | -117.50 | -287.5 | 130.8 | 280.0 | 257.2 | 22.87 | 12.246 | |
| 6,000.0 | 5,990.2 | 5,994.1 | 5,984.6 | 11.9 | 11.8 | -117.44 | -293.1 | 133.2 | 285.1 | 261.8 | 23.26 | 12.255 | |
| 6,100.0 | 6,090.0 | 6,094.0 | 6,084.3 | 12.2 | 12.0 | -117.38 | -298.7 | 135.5 | 290.2 | 266.5 | 23.66 | 12.264 | |
| 6,200.0 | 6,189.8 | 6,193.9 | 6,183.9 | 12.4 | 12.2 | -117.32 | -304.3 | 137.8 | 295.3 | 271.2 | 24.06 | 12.272 | |
| 6,300.0 | 6,289.6 | 6,293.7 | 6,283.6 | 12.6 | 12.4 | -117.27 | -309.9 | 140.2 | 300.3 | 275.9 | 24.46 | 12.281 | |
| 6,400.0 | 6,389.4 | 6,393.6 | 6,383.3 | 12.8 | 12.6 | -117.21 | -315.5 | 142.5 | 305.4 | 280.6 | 24.85 | 12.289 | |
| 6,500.0 | 6,489.3 | 6,493.5 | 6,483.0 | 13.0 | 12.8 | -117.16 | -321.1 | 144.8 | 310.5 | 285.3 | 25.25 | 12.296 | |
| 6,600.0 | 6,589.1 | 6,593.4 | 6,582.7 | 13.2 | 13.0 | -117.11 | -326.7 | 147.1 | 315.6 | 289.9 | 25.65 | 12.304 | |
| 6,700.0 | 6,688.9 | 6,693.2 | 6,682.4 | 13.4 | 13.2 | -117.06 | -332.3 | 149.5 | 320.7 | 294.6 | 26.05 | 12.311 | |
| 6,800.0 | 6,788.7 | 6,793.1 | 6,782.1 | 13.6 | 13.4 | -117.22 | -336.8 | 151.8 | 325.7 | 299.3 | 26.42 | 12.329 | |
| 6,900.0 | 6,888.6 | 6,890.7 | 6,879.2 | 13.8 | 13.5 | -119.70 | -327.6 | 154.1 | 331.2 | 304.5 | 26.65 | 12.425 | |
| 7,000.0 | 6,988.4 | 6,981.2 | 6,966.5 | 14.0 | 13.4 | -152.58 | -304.6 | 156.1 | 338.9 | 312.2 | 26.73 | 12.679 | |
| 7,100.0 | 7,088.0 | 7,066.1 | 7,044.2 | 14.1 | 13.4 | 87.20 | -270.7 | 157.9 | 350.0 | 323.4 | 26.61 | 13.154 | |
| 7,200.0 | 7,184.9 | 7,150.0 | 7,115.3 | 14.0 | 13.2 | 76.84 | -226.3 | 159.6 | 362.9 | 336.6 | 26.31 | 13.794 | |
| 7,300.0 | 7,276.2 | 7,226.6 | 7,174.0 | 13.9 | 13.1 | 71.02 | -177.1 | 161.0 | 376.4 | 350.5 | 25.91 | 14.531 | |
| 7,400.0 | 7,359.0 | 7,300.0 | 7,223.5 | 13.8 | 13.1 | 66.79 | -123.0 | 162.1 | 389.6 | 364.2 | 25.44 | 15.316 | |
| 7,500.0 | 7,430.9 | 7,379.0 | 7,268.6 | 13.7 | 13.1 | 63.42 | -58.2 | 163.2 | 401.4 | 376.4 | 24.97 | 16.072 | |
| 7,600.0 | 7,489.7 | 7,450.0 | 7,301.2 | 13.7 | 13.2 | 61.07 | 4.8 | 163.9 | 411.2 | 386.5 | 24.65 | 16.683 | |
| 7,700.0 | 7,533.6 | 7,526.8 | 7,327.4 | 13.8 | 13.5 | 59.39 | 76.9 | 164.6 | 418.4 | 393.8 | 24.59 | 17.014 | |
| 7,800.0 | 7,561.3 | 7,600.0 | 7,343.2 | 14.2 | 13.8 | 58.47 | 148.3 | 164.9 | 422.7 | 397.8 | 24.90 | 16.978 | |
| 7,900.0 | 7,571.9 | 7,672.5 | 7,349.8 | 14.8 | 14.3 | 58.24 | 220.5 | 165.1 | 424.0 | 398.3 | 25.66 | 16.522 | |
| 7,972.6 | 7,572.8 | 7,739.2 | 7,350.0 | 15.3 | 14.8 | 58.17 | 287.2 | 165.1 | 424.3 | 397.7 | 26.57 | 15.967 | |
| 8,000.0 | 7,572.0 | 7,766.6 | 7,350.0 | 15.5 | 15.0 | 58.26 | 314.6 | 165.1 | 423.9 | 396.9 | 26.96 | 15.721 | |
| 8,100.0 | 7,572.0 | 7,866.6 | 7,350.0 | 16.4 | 15.9 | 58.26 | 414.6 | 165.1 | 423.9 | 395.3 | 28.54 | 14.851 | |
| 8,200.0 | 7,572.0 | 7,966.6 | 7,350.0 | 17.4 | 17.0 | 58.26 | 514.6 | 165.1 | 423.9 | 393.6 | 30.33 | 13.974 | |
| 8,300.0 | 7,572.0 | 8,066.6 | 7,350.0 | 18.6 | 18.1 | 58.26 | 614.6 | 165.1 | 423.9 | 391.6 | 32.30 | 13.122 | |
| 8,400.0 | 7,572.0 | 8,166.6 | 7,350.0 | 19.8 | 19.4 | 58.26 | 714.6 | 165.1 | 423.9 | 389.5 | 34.42 | 12.315 | |
| 8,500.0 | 7,572.0 | 8,266.6 | 7,350.0 | 21.1 | 20.7 | 58.26 | 814.6 | 165.1 | 423.9 | 387.2 | 36.66 | 11.562 | |
| 8,600.0 | 7,572.0 | 8,366.6 | 7,350.0 | 22.4 | 22.1 | 58.26 | 914.6 | 165.1 | 423.9 | 384.9 | 39.00 | 10.868 | |
| 8,700.0 | 7,572.0 | 8,466.6 | 7,350.0 | 23.9 | 23.5 | 58.26 | 1,014.6 | 165.1 | 423.9 | 382.5 | 41.43 | 10.232 | |
| 8,800.0 | 7,572.0 | 8,566.6 | 7,350.0 | 25.3 | 25.0 | 58.26 | 1,114.6 | 165.1 | 423.9 | 380.0 | 43.92 | 9.651 | |
| 8,900.0 | 7,572.0 | 8,666.6 | 7,350.0 | 26.8 | 26.5 | 58.26 | 1,214.6 | 165.1 | 423.9 | 377.4 | 46.47 | 9.121 | |
| 9,000.0 | 7,572.0 | 8,766.6 | 7,350.0 | 28.3 | 28.0 | 58.26 | 1,314.6 | 165.1 | 423.9 | 374.8 | 49.08 | 8.637 | |
| 9,100.0 | 7,572.0 | 8,866.6 | 7,350.0 | 29.9 | 29.6 | 58.26 | 1,414.6 | 165.1 | 423.9 | 372.2 | 51.72 | 8.196 | |
| 9,200.0 | 7,572.0 | 8,966.6 | 7,350.0 | 31.4 | 31.2 | 58.26 | 1,514.6 | 165.1 | 423.9 | 369.5 | 54.40 | 7.792 | |
| 9,300.0 | 7,572.0 | 9,066.6 | 7,350.0 | 33.0 | 32.8 | 58.26 | 1,614.6 | 165.1 | 423.9 | 366.8 | 57.11 | 7.422 | |
| 9,400.0 | 7,572.0 | 9,166.6 | 7,350.0 | 34.6 | 34.4 | 58.26 | 1,714.6 | 165.1 | 423.9 | 364.0 | 59.85 | 7.083 | |
| 9,500.0 | 7,572.0 | 9,266.6 | 7,350.0 | 36.2 | 36.0 | 58.26 | 1,814.6 | 165.1 | 423.9 | 361.3 | 62.61 | 6.770 | |
| 9,600.0 | 7,572.0 | 9,366.6 | 7,350.0 | 37.9 | 37.6 | 58.26 | 1,914.6 | 165.1 | 423.9 | 358.5 | 65.39 | 6.482 | |
| 9,700.0 | 7,572.0 | 9,466.6 | 7,350.0 | 39.5 | 39.3 | 58.26 | 2,014.6 | 165.1 | 423.9 | 355.7 | 68.19 | 6.216 | |
| 9,800.0 | 7,572.0 | 9,566.6 | 7,350.0 | 41.2 | 40.9 | 58.26 | 2,114.6 | 165.1 | 423.9 | 352.9 | 71.00 | 5.970 | |
| 9,900.0 | 7,572.0 | 9,666.6 | 7,350.0 | 42.8 | 42.6 | 58.26 | 2,214.6 | 165.1 | 423.9 | 350.1 | 73.83 | 5.741 | |
| 10,000.0 | 7,572.0 | 9,766.6 | 7,350.0 | 44.5 | 44.3 | 58.26 | 2,314.6 | 165.1 | 423.9 | 347.2 | 76.67 | 5.529 | |
| 10,100.0 | 7,572.0 | 9,866.6 | 7,350.0 | 46.2 | 46.0 | 58.26 | 2,414.6 | 165.1 | 423.9 | 344.4 | 79.52 | 5.330 | |
| 10,200.0 | 7,572.0 | 9,966.6 | 7,350.0 | 47.8 | 47.6 | 58.26 | 2,514.6 | 165.1 | 423.9 | 341.5 | 82.39 | 5.145 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3C-22H-M268 - Hz - Plan #1

**Survey Program:** 0-Geolink MWD

**Offset Site Error:** 0.0 ft

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 10,300.0 | 7,572.0 | 10,066.6 | 7,350.0 | 49.5 | 49.3 | 58.26 | 2,614.6 | 165.1 | 423.9 | 338.6 | 85.26 | 4.972 | |
| 10,400.0 | 7,572.0 | 10,166.6 | 7,350.0 | 51.2 | 51.0 | 58.26 | 2,714.6 | 165.1 | 423.9 | 335.8 | 88.13 | 4.810 | |
| 10,500.0 | 7,572.0 | 10,266.6 | 7,350.0 | 52.9 | 52.7 | 58.26 | 2,814.6 | 165.1 | 423.9 | 332.9 | 91.02 | 4.657 | |
| 10,600.0 | 7,572.0 | 10,366.6 | 7,350.0 | 54.6 | 54.4 | 58.26 | 2,914.6 | 165.1 | 423.9 | 330.0 | 93.91 | 4.514 | |
| 10,700.0 | 7,572.0 | 10,466.6 | 7,350.0 | 56.3 | 56.1 | 58.26 | 3,014.6 | 165.1 | 423.9 | 327.1 | 96.81 | 4.379 | |
| 10,800.0 | 7,572.0 | 10,566.6 | 7,350.0 | 58.0 | 57.8 | 58.26 | 3,114.6 | 165.1 | 423.9 | 324.2 | 99.71 | 4.251 | |
| 10,900.0 | 7,572.0 | 10,666.6 | 7,350.0 | 59.7 | 59.5 | 58.26 | 3,214.6 | 165.1 | 423.9 | 321.3 | 102.62 | 4.131 | |
| 11,000.0 | 7,572.0 | 10,766.6 | 7,350.0 | 61.4 | 61.3 | 58.26 | 3,314.6 | 165.1 | 423.9 | 318.4 | 105.54 | 4.017 | |
| 11,100.0 | 7,572.0 | 10,866.6 | 7,350.0 | 63.1 | 63.0 | 58.26 | 3,414.6 | 165.1 | 423.9 | 315.4 | 108.45 | 3.909 | |
| 11,200.0 | 7,572.0 | 10,966.6 | 7,350.0 | 64.8 | 64.7 | 58.26 | 3,514.6 | 165.1 | 423.9 | 312.5 | 111.37 | 3.806 | |
| 11,300.0 | 7,572.0 | 11,066.6 | 7,350.0 | 66.6 | 66.4 | 58.26 | 3,614.6 | 165.1 | 423.9 | 309.6 | 114.30 | 3.709 | |
| 11,400.0 | 7,572.0 | 11,166.6 | 7,350.0 | 68.3 | 68.1 | 58.26 | 3,714.6 | 165.1 | 423.9 | 306.7 | 117.23 | 3.616 | |
| 11,500.0 | 7,572.0 | 11,266.6 | 7,350.0 | 70.0 | 69.8 | 58.26 | 3,814.6 | 165.1 | 423.9 | 303.7 | 120.16 | 3.528 | |
| 11,600.0 | 7,572.0 | 11,366.6 | 7,350.0 | 71.7 | 71.6 | 58.26 | 3,914.6 | 165.1 | 423.9 | 300.8 | 123.09 | 3.444 | |
| 11,700.0 | 7,572.0 | 11,466.6 | 7,350.0 | 73.4 | 73.3 | 58.26 | 4,014.6 | 165.1 | 423.9 | 297.9 | 126.03 | 3.363 | |
| 11,800.0 | 7,572.0 | 11,566.6 | 7,350.0 | 75.2 | 75.0 | 58.26 | 4,114.6 | 165.1 | 423.9 | 294.9 | 128.97 | 3.287 | |
| 11,800.0 | 7,572.0 | 11,566.6 | 7,350.0 | 75.2 | 75.0 | 58.26 | 4,114.6 | 165.1 | 423.9 | 294.9 | 128.97 | 3.287 | |
| 11,900.0 | 7,572.0 | 11,666.6 | 7,350.0 | 76.9 | 76.8 | 58.29 | 4,214.6 | 165.1 | 424.3 | 292.3 | 131.96 | 3.215 | |
| 12,000.0 | 7,572.0 | 11,766.6 | 7,350.0 | 78.6 | 78.5 | 58.43 | 4,314.6 | 165.1 | 426.1 | 291.1 | 135.08 | 3.155 | |
| 12,100.0 | 7,572.0 | 11,866.5 | 7,350.0 | 80.3 | 80.2 | 58.69 | 4,414.5 | 165.1 | 429.5 | 291.2 | 138.32 | 3.105 | |
| 12,200.0 | 7,572.0 | 11,966.4 | 7,350.0 | 82.1 | 81.9 | 59.05 | 4,514.4 | 165.1 | 434.3 | 292.6 | 141.68 | 3.066 | |
| 12,300.0 | 7,572.0 | 12,066.1 | 7,350.0 | 83.8 | 83.7 | 59.51 | 4,614.1 | 165.1 | 440.3 | 295.0 | 145.25 | 3.031 | |
| 12,400.0 | 7,572.0 | 12,165.9 | 7,350.0 | 85.5 | 85.4 | 59.96 | 4,713.9 | 165.1 | 446.3 | 297.4 | 148.87 | 2.998 | |
| 12,500.0 | 7,572.0 | 12,265.6 | 7,350.0 | 87.3 | 87.1 | 60.40 | 4,813.6 | 165.1 | 452.4 | 299.9 | 152.50 | 2.966 | |
| 12,600.0 | 7,572.0 | 12,365.4 | 7,350.0 | 89.0 | 88.9 | 60.83 | 4,913.4 | 165.1 | 458.4 | 302.3 | 156.12 | 2.936 | |
| 12,700.0 | 7,572.0 | 12,465.1 | 7,350.0 | 90.7 | 90.6 | 61.25 | 5,013.1 | 165.1 | 464.5 | 304.8 | 159.76 | 2.908 | |
| 12,800.0 | 7,572.0 | 12,564.9 | 7,350.0 | 92.5 | 92.3 | 61.66 | 5,112.9 | 165.1 | 470.7 | 307.3 | 163.39 | 2.881 | |
| 12,900.0 | 7,572.0 | 12,664.7 | 7,350.0 | 94.2 | 94.0 | 62.06 | 5,212.7 | 165.1 | 476.8 | 309.8 | 167.03 | 2.855 | |
| 13,000.0 | 7,572.0 | 12,764.4 | 7,350.0 | 96.0 | 95.8 | 62.45 | 5,312.4 | 165.1 | 483.0 | 312.3 | 170.66 | 2.830 | |
| 13,100.0 | 7,572.0 | 12,864.2 | 7,350.0 | 97.7 | 97.5 | 62.82 | 5,412.2 | 165.1 | 489.2 | 314.9 | 174.30 | 2.807 | |
| 13,200.0 | 7,572.0 | 12,963.9 | 7,350.0 | 99.4 | 99.2 | 63.19 | 5,511.9 | 165.1 | 495.4 | 317.5 | 177.94 | 2.784 | |
| 15,100.0 | 7,572.0 | 14,848.7 | 7,350.0 | 132.2 | 132.1 | 61.34 | 7,396.7 | 165.1 | 491.6 | 274.6 | 216.92 | 2.266 | |
| 15,200.0 | 7,572.0 | 14,940.4 | 7,350.0 | 133.8 | 133.7 | 58.22 | 7,488.4 | 165.1 | 456.6 | 249.6 | 206.98 | 2.206 | |
| 15,300.0 | 7,572.0 | 15,029.2 | 7,350.0 | 135.4 | 135.2 | 53.99 | 7,577.2 | 165.1 | 417.0 | 223.8 | 193.16 | 2.159 | |
| 15,333.5 | 7,572.0 | 15,058.2 | 7,350.0 | 135.9 | 135.7 | 52.26 | 7,606.2 | 165.1 | 402.9 | 215.4 | 187.47 | 2.149 | SF |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3D-22H-M268 - Hz - Plan #1

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0.0 | 0.0 | 1.0 | 1.0 | 0.0 | 0.0 | 90.05 | 0.0 | 19.6 | 19.6 | | | | |
| 100.0 | 100.0 | 101.0 | 101.0 | 0.1 | 0.1 | 90.05 | 0.0 | 19.6 | 19.6 | 19.3 | 0.26 | 74.296 | |
| 200.0 | 200.0 | 201.0 | 201.0 | 0.3 | 0.3 | 90.05 | 0.0 | 19.6 | 19.6 | 19.0 | 0.61 | 31.962 | |
| 300.0 | 300.0 | 301.0 | 301.0 | 0.5 | 0.5 | 90.05 | 0.0 | 19.6 | 19.6 | 18.6 | 0.96 | 20.361 | CC, ES |
| 400.0 | 400.0 | 401.0 | 401.0 | 0.7 | 0.7 | -119.46 | 0.0 | 19.6 | 20.0 | 18.7 | 1.31 | 15.249 | |
| 500.0 | 500.0 | 501.0 | 501.0 | 0.8 | 0.8 | -125.56 | 0.0 | 19.6 | 21.4 | 19.7 | 1.66 | 12.872 | |
| 600.0 | 599.9 | 600.6 | 600.6 | 1.0 | 1.0 | -132.23 | -0.6 | 20.3 | 24.7 | 22.7 | 2.02 | 12.246 | SF |
| 700.0 | 699.7 | 700.2 | 700.2 | 1.2 | 1.2 | -136.32 | -2.3 | 22.3 | 30.2 | 27.8 | 2.37 | 12.720 | |
| 800.0 | 799.5 | 799.7 | 799.5 | 1.4 | 1.4 | -136.94 | -5.0 | 25.6 | 36.8 | 34.0 | 2.74 | 13.431 | |
| 900.0 | 899.3 | 899.0 | 898.7 | 1.6 | 1.6 | -135.43 | -8.9 | 30.2 | 44.3 | 41.1 | 3.11 | 14.221 | |
| 1,000.0 | 999.2 | 998.3 | 997.6 | 1.8 | 1.8 | -132.79 | -13.9 | 36.2 | 52.7 | 49.2 | 3.49 | 15.079 | |
| 1,100.0 | 1,099.0 | 1,097.8 | 1,096.8 | 2.0 | 2.0 | -130.39 | -19.3 | 42.6 | 61.6 | 57.7 | 3.88 | 15.871 | |
| 1,200.0 | 1,198.8 | 1,197.4 | 1,196.1 | 2.2 | 2.2 | -128.59 | -24.7 | 49.1 | 70.6 | 66.3 | 4.27 | 16.531 | |
| 1,300.0 | 1,298.6 | 1,297.0 | 1,295.3 | 2.4 | 2.4 | -127.20 | -30.1 | 55.5 | 79.7 | 75.0 | 4.66 | 17.088 | |
| 1,400.0 | 1,398.4 | 1,396.5 | 1,394.5 | 2.6 | 2.6 | -126.10 | -35.6 | 62.0 | 88.7 | 83.7 | 5.05 | 17.563 | |
| 1,500.0 | 1,498.3 | 1,496.1 | 1,493.7 | 2.8 | 2.8 | -125.20 | -41.0 | 68.5 | 97.9 | 92.4 | 5.44 | 17.973 | |
| 1,600.0 | 1,598.1 | 1,595.7 | 1,592.9 | 3.0 | 3.0 | -124.45 | -46.4 | 74.9 | 107.0 | 101.1 | 5.84 | 18.330 | |
| 1,700.0 | 1,697.9 | 1,695.3 | 1,692.1 | 3.2 | 3.3 | -123.82 | -51.8 | 81.4 | 116.1 | 109.9 | 6.23 | 18.643 | |
| 1,800.0 | 1,797.7 | 1,794.8 | 1,791.4 | 3.4 | 3.5 | -123.29 | -57.2 | 87.9 | 125.3 | 118.7 | 6.62 | 18.920 | |
| 1,900.0 | 1,897.5 | 1,894.4 | 1,890.6 | 3.6 | 3.7 | -122.82 | -62.6 | 94.3 | 134.5 | 127.4 | 7.02 | 19.166 | |
| 2,000.0 | 1,997.4 | 1,994.0 | 1,989.8 | 3.8 | 3.9 | -122.42 | -68.0 | 100.8 | 143.6 | 136.2 | 7.41 | 19.387 | |
| 2,100.0 | 2,097.2 | 2,093.6 | 2,089.0 | 4.0 | 4.2 | -122.06 | -73.4 | 107.2 | 152.8 | 145.0 | 7.80 | 19.586 | |
| 2,200.0 | 2,197.0 | 2,193.1 | 2,188.2 | 4.2 | 4.4 | -121.75 | -78.8 | 113.7 | 162.0 | 153.8 | 8.20 | 19.767 | |
| 2,300.0 | 2,296.8 | 2,292.7 | 2,287.4 | 4.4 | 4.6 | -121.47 | -84.2 | 120.2 | 171.2 | 162.6 | 8.59 | 19.931 | |
| 2,400.0 | 2,396.6 | 2,392.3 | 2,386.7 | 4.6 | 4.8 | -121.21 | -89.7 | 126.6 | 180.4 | 171.4 | 8.98 | 20.080 | |
| 2,500.0 | 2,496.5 | 2,491.9 | 2,485.9 | 4.8 | 5.1 | -120.98 | -95.1 | 133.1 | 189.6 | 180.2 | 9.38 | 20.218 | |
| 2,600.0 | 2,596.3 | 2,591.4 | 2,585.1 | 5.0 | 5.3 | -120.78 | -100.5 | 139.5 | 198.8 | 189.0 | 9.77 | 20.344 | |
| 2,700.0 | 2,696.1 | 2,691.0 | 2,684.3 | 5.2 | 5.5 | -120.59 | -105.9 | 146.0 | 208.0 | 197.8 | 10.17 | 20.461 | |
| 2,800.0 | 2,795.9 | 2,790.6 | 2,783.5 | 5.4 | 5.7 | -120.41 | -111.3 | 152.5 | 217.2 | 206.6 | 10.56 | 20.569 | |
| 2,900.0 | 2,895.7 | 2,890.1 | 2,882.7 | 5.6 | 6.0 | -120.26 | -116.7 | 158.9 | 226.4 | 215.5 | 10.95 | 20.669 | |
| 3,000.0 | 2,995.6 | 2,989.7 | 2,982.0 | 5.8 | 6.2 | -120.11 | -122.1 | 165.4 | 235.6 | 224.3 | 11.35 | 20.763 | |
| 3,100.0 | 3,095.4 | 3,089.3 | 3,081.2 | 6.1 | 6.4 | -119.97 | -127.5 | 171.8 | 244.8 | 233.1 | 11.74 | 20.850 | |
| 3,200.0 | 3,195.2 | 3,188.9 | 3,180.4 | 6.3 | 6.6 | -119.85 | -132.9 | 178.3 | 254.0 | 241.9 | 12.14 | 20.931 | |
| 3,300.0 | 3,295.0 | 3,288.4 | 3,279.6 | 6.5 | 6.9 | -119.73 | -138.4 | 184.8 | 263.2 | 250.7 | 12.53 | 21.008 | |
| 3,400.0 | 3,394.8 | 3,388.0 | 3,378.8 | 6.7 | 7.1 | -119.62 | -143.8 | 191.2 | 272.5 | 259.5 | 12.93 | 21.080 | |
| 3,500.0 | 3,494.7 | 3,487.6 | 3,478.0 | 6.9 | 7.3 | -119.52 | -149.2 | 197.7 | 281.7 | 268.4 | 13.32 | 21.147 | |
| 3,600.0 | 3,594.5 | 3,587.2 | 3,577.2 | 7.1 | 7.5 | -119.43 | -154.6 | 204.1 | 290.9 | 277.2 | 13.71 | 21.211 | |
| 3,700.0 | 3,694.3 | 3,686.7 | 3,676.5 | 7.3 | 7.8 | -119.34 | -160.0 | 210.6 | 300.1 | 286.0 | 14.11 | 21.271 | |
| 3,800.0 | 3,794.1 | 3,786.3 | 3,775.7 | 7.5 | 8.0 | -119.25 | -165.4 | 217.1 | 309.3 | 294.8 | 14.50 | 21.328 | |
| 3,900.0 | 3,893.9 | 3,885.9 | 3,874.9 | 7.7 | 8.2 | -119.17 | -170.8 | 223.5 | 318.5 | 303.6 | 14.90 | 21.382 | |
| 4,000.0 | 3,993.8 | 3,985.5 | 3,974.1 | 7.9 | 8.5 | -119.10 | -176.2 | 230.0 | 327.8 | 312.5 | 15.29 | 21.433 | |
| 4,100.0 | 4,093.6 | 4,085.0 | 4,073.3 | 8.1 | 8.7 | -119.03 | -181.6 | 236.4 | 337.0 | 321.3 | 15.69 | 21.482 | |
| 4,200.0 | 4,193.4 | 4,184.6 | 4,172.5 | 8.3 | 8.9 | -118.96 | -187.1 | 242.9 | 346.2 | 330.1 | 16.08 | 21.528 | |
| 4,300.0 | 4,293.2 | 4,284.2 | 4,271.8 | 8.5 | 9.1 | -118.90 | -192.5 | 249.4 | 355.4 | 338.9 | 16.48 | 21.572 | |
| 4,400.0 | 4,393.0 | 4,383.7 | 4,371.0 | 8.7 | 9.4 | -118.84 | -197.9 | 255.8 | 364.6 | 347.8 | 16.87 | 21.614 | |
| 4,500.0 | 4,492.9 | 4,483.3 | 4,470.2 | 8.9 | 9.6 | -118.78 | -203.3 | 262.3 | 373.9 | 356.6 | 17.26 | 21.654 | |
| 4,600.0 | 4,592.7 | 4,582.9 | 4,569.4 | 9.1 | 9.8 | -118.72 | -208.7 | 268.7 | 383.1 | 365.4 | 17.66 | 21.693 | |
| 4,700.0 | 4,692.5 | 4,682.5 | 4,668.6 | 9.3 | 10.0 | -118.67 | -214.1 | 275.2 | 392.3 | 374.2 | 18.05 | 21.729 | |
| 4,800.0 | 4,792.3 | 4,782.0 | 4,767.8 | 9.5 | 10.3 | -118.62 | -219.5 | 281.7 | 401.5 | 383.1 | 18.45 | 21.764 | |
| 4,900.0 | 4,892.1 | 4,881.6 | 4,867.1 | 9.7 | 10.5 | -118.58 | -224.9 | 288.1 | 410.7 | 391.9 | 18.84 | 21.798 | |
| 5,000.0 | 4,992.0 | 4,981.2 | 4,966.3 | 9.9 | 10.7 | -118.53 | -230.3 | 294.6 | 420.0 | 400.7 | 19.24 | 21.830 | |
| 5,100.0 | 5,091.8 | 5,080.8 | 5,065.5 | 10.1 | 11.0 | -118.49 | -235.7 | 301.0 | 429.2 | 409.6 | 19.63 | 21.861 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - Jillson-East Rinn 3D-22H-M268 - Hz - Plan #1

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,200.0 | 5,191.6 | 5,180.3 | 5,164.7 | 10.3 | 11.2 | -118.45 | -241.2 | 307.5 | 438.4 | 418.4 | 20.03 | 21.891 | |
| 5,300.0 | 5,291.4 | 5,279.9 | 5,263.9 | 10.5 | 11.4 | -118.41 | -246.6 | 314.0 | 447.6 | 427.2 | 20.42 | 21.919 | |
| 5,400.0 | 5,391.2 | 5,379.5 | 5,363.1 | 10.7 | 11.6 | -118.37 | -252.0 | 320.4 | 456.9 | 436.0 | 20.82 | 21.947 | |
| 5,500.0 | 5,491.1 | 5,479.1 | 5,462.4 | 10.9 | 11.9 | -118.33 | -257.4 | 326.9 | 466.1 | 444.9 | 21.21 | 21.973 | |
| 5,600.0 | 5,590.9 | 5,578.6 | 5,561.6 | 11.1 | 12.1 | -118.30 | -262.8 | 333.3 | 475.3 | 453.7 | 21.61 | 21.999 | |
| 5,700.0 | 5,690.7 | 5,678.2 | 5,660.8 | 11.3 | 12.3 | -118.26 | -268.2 | 339.8 | 484.5 | 462.5 | 22.00 | 22.023 | |
| 5,800.0 | 5,790.5 | 5,777.8 | 5,760.0 | 11.5 | 12.5 | -118.23 | -273.6 | 346.3 | 493.7 | 471.4 | 22.40 | 22.047 | |

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** S22-T2N-R68W (Jillson-East Rinn) - NYGREN 12-22 (EXISTING) - KERR-MCGEE WELL - NO SURVE

**Offset Site Error:** 0.0 ft

**Survey Program:** 7710-Geolink MWD

**Offset Well Error:** 0.0 ft

| Reference Measured Depth (ft) | Reference Vertical Depth (ft) | Offset Measured Depth (ft) | Offset Vertical Depth (ft) | Semi Major Axis Reference (ft) | Semi Major Axis Offset (ft) | Highside Toolface (°) | Offset Wellbore Centre +N/-S (ft) | Offset Wellbore Centre +E/-W (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Total Uncertainty Axis | Separation Factor | Warning |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 8,900.0 | 7,572.0 | 7,518.0 | 7,518.0 | 26.8 | 13.1 | 90.00 | 1,617.4 | 75.4 | 485.3 | 445.6 | 39.70 | 12.225 | |
| 9,000.0 | 7,572.0 | 7,518.0 | 7,518.0 | 28.3 | 13.1 | 90.00 | 1,617.4 | 75.4 | 406.2 | 365.0 | 41.23 | 9.851 | |
| 9,100.0 | 7,572.0 | 7,518.0 | 7,518.0 | 29.9 | 13.1 | 90.00 | 1,617.4 | 75.4 | 338.3 | 295.5 | 42.79 | 7.905 | |
| 9,200.0 | 7,572.0 | 7,518.0 | 7,518.0 | 31.4 | 13.1 | 90.00 | 1,617.4 | 75.4 | 289.6 | 245.2 | 44.37 | 6.527 | |
| 9,300.0 | 7,572.0 | 7,518.0 | 7,518.0 | 33.0 | 13.1 | 90.00 | 1,617.4 | 75.4 | 270.8 | 224.8 | 45.97 | 5.890 | |
| 9,302.8 | 7,572.0 | 7,518.0 | 7,518.0 | 33.1 | 13.1 | 90.00 | 1,617.4 | 75.4 | 270.8 | 224.7 | 46.01 | 5.884 | CC, ES, SF |
| 9,400.0 | 7,572.0 | 7,518.0 | 7,518.0 | 34.6 | 13.1 | 90.00 | 1,617.4 | 75.4 | 287.7 | 240.1 | 47.58 | 6.046 | |
| 9,500.0 | 7,572.0 | 7,518.0 | 7,518.0 | 36.2 | 13.1 | 90.00 | 1,617.4 | 75.4 | 335.0 | 285.8 | 49.21 | 6.808 | |
| 9,600.0 | 7,572.0 | 7,518.0 | 7,518.0 | 37.9 | 13.1 | 90.00 | 1,617.4 | 75.4 | 402.1 | 351.2 | 50.84 | 7.908 | |
| 9,700.0 | 7,572.0 | 7,518.0 | 7,518.0 | 39.5 | 13.1 | 90.00 | 1,617.4 | 75.4 | 480.7 | 428.2 | 52.49 | 9.158 | |

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

| | | | |
|---|---|---|---|
| **Company:** | EnCana Oil & Gas (USA) Inc | **Local Co-ordinate Reference:** | Well Jillson-East Rinn 3B-22H-M268 |
| **Project:** | DJ Wattenberg | **TVD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Reference Site:** | S22-T2N-R68W (Jillson-East Rinn) | **MD Reference:** | WELL @ 4974.0ft (Original Well Elev) |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Jillson-East Rinn 3B-22H-M268 | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | Hz | **Database:** | USA EDM 5000 Multi Users DB |
| **Reference Design:** | Plan #1 | **Offset TVD Reference:** | Offset Datum |

| | |
|---|---|
| Reference Depths are relative to WELL @ 4974.0ft (Original Well Elev) | Coordinates are relative to: Jillson-East Rinn 3B-22H-M268 |
| Offset Depths are relative to Offset Datum | Coordinate System is US State Plane 1983, Colorado Northern Zone |
| Central Meridian is -105.500000 ° | Grid Convergence at Surface is: 0.33° |