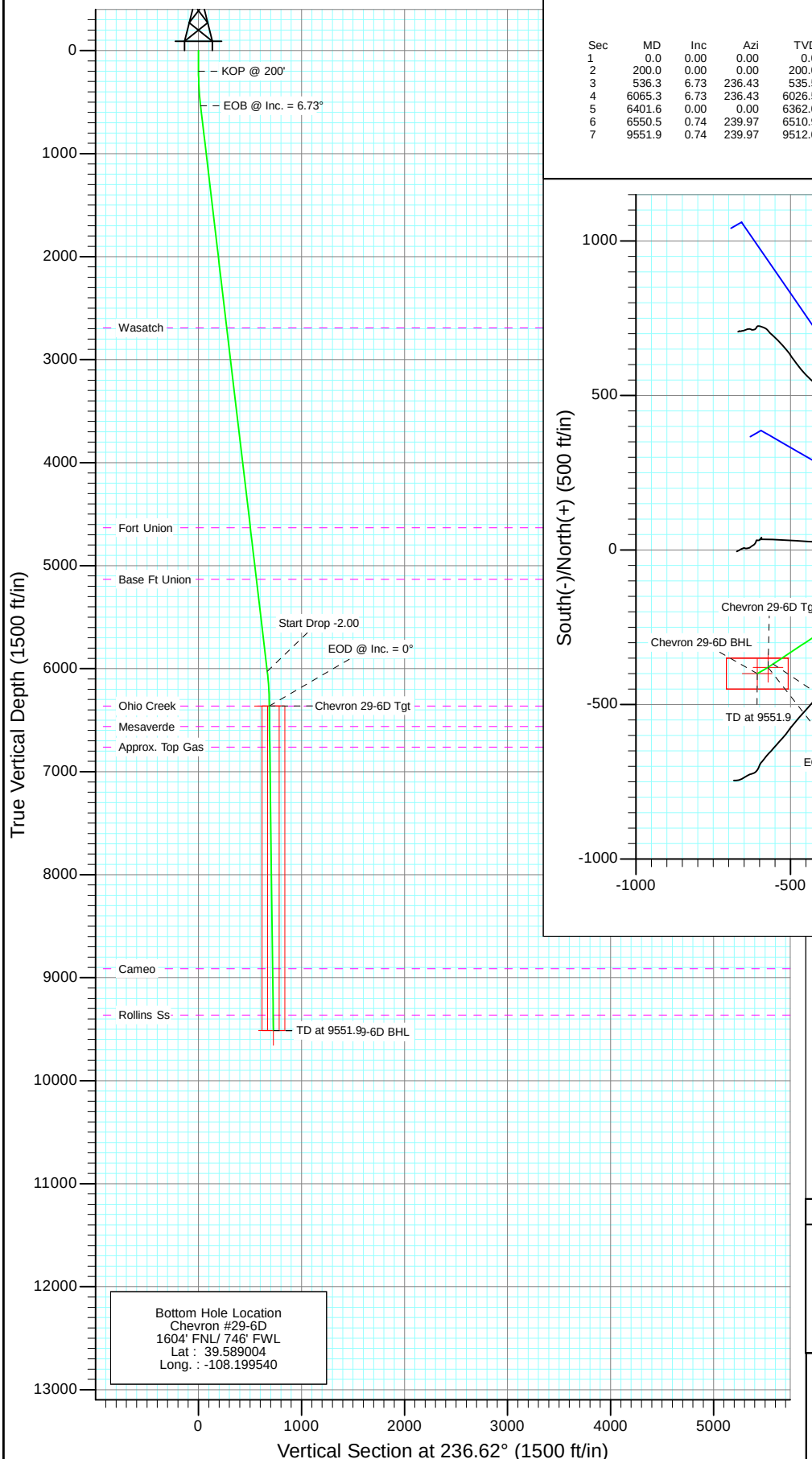
Berry Petroleum Company

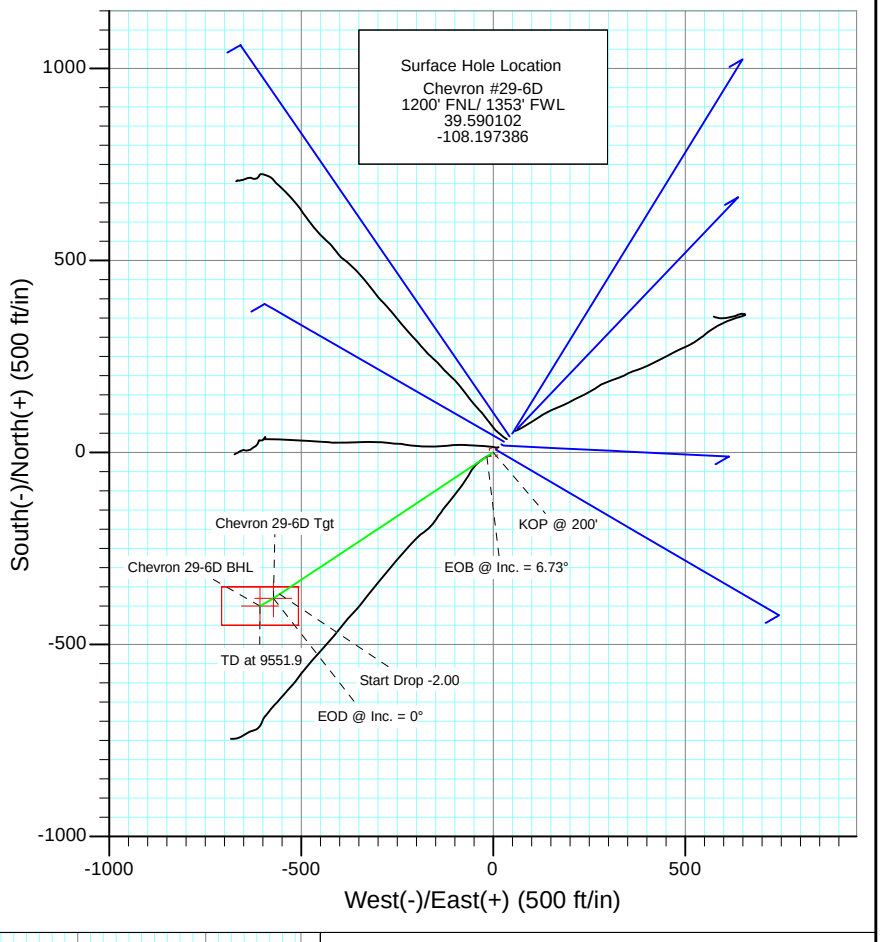
Project: Garfield County
Site: Chevron C-D29-596
Well: Chevron #29-6D
Wellbore: DD
Design: Plan #3

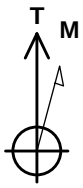
CATHEDRAL

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 | 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 536.3 | 6.73 | 236.43 | 535.5 | -10.9 | -16.4 | 2.00 | 236.43 | 19.7 | |
| 4 | 6065.3 | 6.73 | 236.43 | 6026.5 | -369.0 | -556.0 | 0.00 | 0.00 | 667.3 | |
| 5 | 6401.6 | 0.00 | 0.00 | 6362.0 | -379.9 | -572.5 | 2.00 | 180.00 | 687.0 | Chevron 29-6D Tgt |
| 6 | 6550.5 | 0.74 | 239.97 | 6510.9 | -380.4 | -573.3 | 0.50 | 239.97 | 688.0 | |
| 7 | 9551.9 | 0.74 | 239.97 | 9512.0 | -399.9 | -607.1 | 0.00 | 0.00 | 726.9 | Chevron 29-6D BHL |




Azimuths to True North
Magnetic North: 10.80°

Magnetic Field
Strength: 52536.9snT
Dip Angle: 65.85°
Date: 9/22/2008
Model: IGRF2010

FORMATION TOP DETAILS

| TVDPath | MDPath | Formation |
|---|---|---|
| 2692.0 | 2707.7 | Wasatch |
| 4632.0 | 4661.2 | Fort Union |
| 5132.0 | 5164.6 | Base Ft Union |
| 6362.0 | 6401.6 | Ohio Creek |
| 6562.0 | 6601.6 | Mesaverde |
| 6762.0 | 6801.6 | Approx. Top Gas |
| 8912.0 | 8951.8 | Cameo |
| 9362.0 | 9401.8 | Rollins Ss |

DESIGN DETAILS: Plan #3

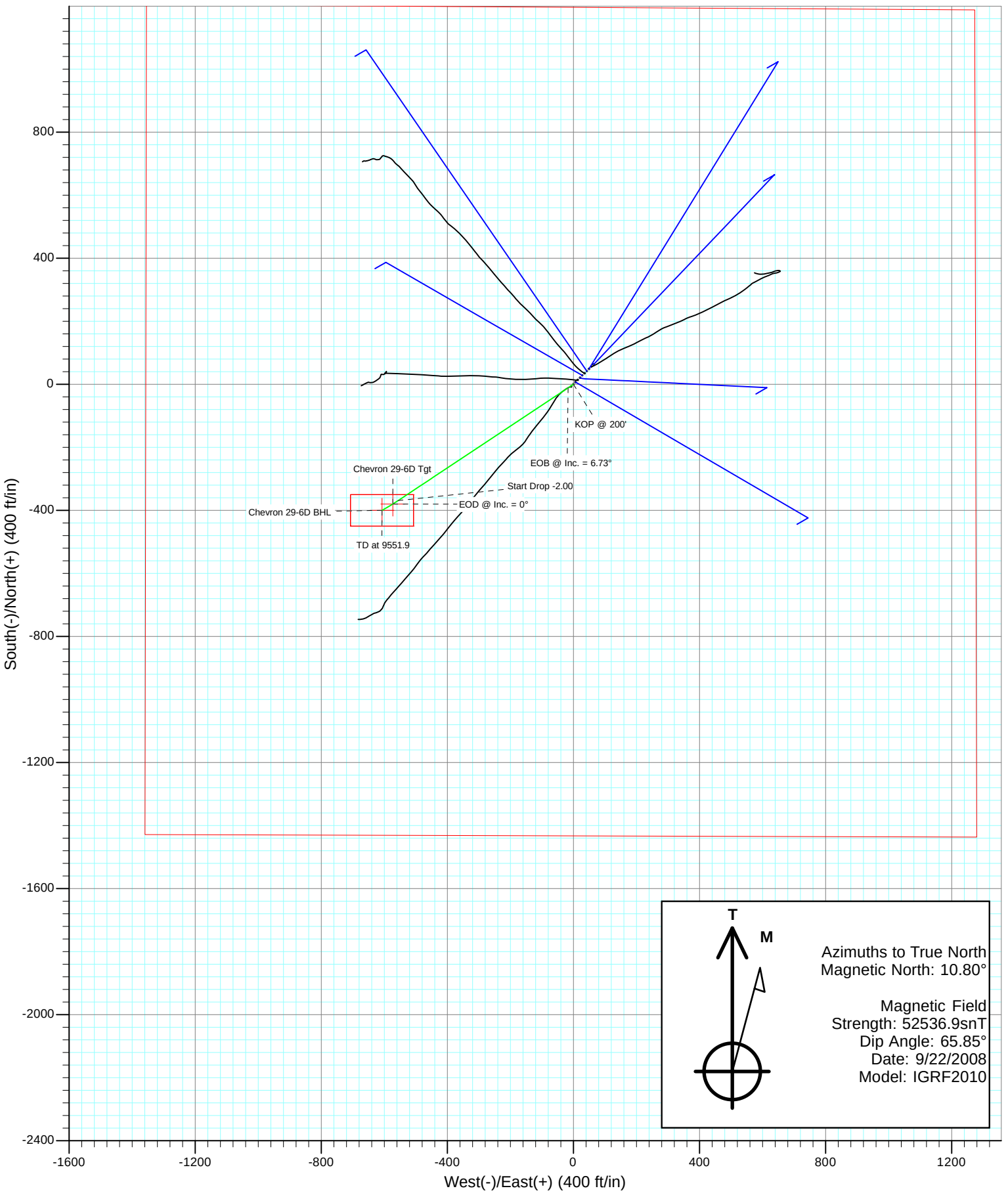
JOB#:11XXXX; SC
Well @ 7896.0ft

| Target | Azimuth | Origin | N/S | E/W | From TVD |
|---|---|---|---|---|---|
| Chevron 29-6D BHL | 236.62 | Slot | 0.0 | 0.0 | 0.0 |

Berry Petroleum Company

Project: Garfield County
Site: Chevron C-D29-596
Well: Chevron #29-6D
Wellbore: DD
Design: Plan #3

CATHEDRAL



# Planning Report

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.1 US Multi Users DB | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Company:** | Berry Petroleum Company (NAD 83) | **TVD Reference:** | Well @ 7896.0ft |
| **Project:** | Garfield County | **MD Reference:** | Well @ 7896.0ft |
| **Site:** | Chevron C-D29-596 | **North Reference:** | True |
| **Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | DD | | |
| **Design:** | Plan #3 | | |

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

| **Site** | Chevron C-D29-596 | | | | |
|---|---|---|---|---|---|
| **Site Position:** | | **Northing:** | 1,651,165.49 ft | **Latitude:** | 39.590256 |
| **From:** | Lat/Long | **Easting:** | 2,239,989.14 ft | **Longitude:** | -108.197183 |
| **Position Uncertainty:** | 0.0 ft | **Slot Radius:** | 13.200 in | **Grid Convergence:** | -1.70 ° |

| **Well** | Chevron #29-6D | | | | | |
|---|---|---|---|---|---|---|
| **Well Position** | **+N/-S** | 0.0 ft | **Northing:** | 1,651,111.08 ft | **Latitude:** | 39.590102 |
| | **+E/-W** | 0.0 ft | **Easting:** | 2,239,930.29 ft | **Longitude:** | -108.197386 |
| **Position Uncertainty** | | 0.0 ft | **Wellhead Elevation:** | ft | **Ground Level:** | 7,881.0 ft |

| **Wellbore** | DD | | | | |
|---|---|---|---|---|---|
| **Magnetics** | **Model Name** | **Sample Date** | **Declination (°)** | **Dip Angle (°)** | **Field Strength (nT)** |
| | IGRF2010 | 9/22/2008 | 10.80 | 65.85 | 52,537 |

| **Design** | Plan #3 | | | | |
|---|---|---|---|---|---|
| **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 | 236.62 | |

**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 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 536.3 | 6.73 | 236.43 | 535.5 | -10.9 | -16.4 | 2.00 | 2.00 | 0.00 | 236.43 | |
| 6,065.3 | 6.73 | 236.43 | 6,026.5 | -369.0 | -556.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,401.6 | 0.00 | 0.00 | 6,362.0 | -379.9 | -572.5 | 2.00 | -2.00 | 0.00 | 180.00 | Chevron 29-6D Tgt |
| 6,550.5 | 0.74 | 239.97 | 6,510.9 | -380.4 | -573.3 | 0.50 | 0.50 | -80.59 | 239.97 | |
| 9,551.9 | 0.74 | 239.97 | 9,512.0 | -399.9 | -607.1 | 0.00 | 0.00 | 0.00 | 0.00 | Chevron 29-6D BHL |

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.1 US Multi Users DB | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Company:** | Berry Petroleum Company (NAD 83) | **TVD Reference:** | Well @ 7896.0ft |
| **Project:** | Garfield County | **MD Reference:** | Well @ 7896.0ft |
| **Site:** | Chevron C-D29-596 | **North Reference:** | True |
| **Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | DD | | |
| **Design:** | Plan #3 | | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| 30.0 | 0.00 | 0.00 | 30.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 60.0 | 0.00 | 0.00 | 60.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 90.0 | 0.00 | 0.00 | 90.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 120.0 | 0.00 | 0.00 | 120.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 150.0 | 0.00 | 0.00 | 150.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | |
| 180.0 | 0.00 | 0.00 | 180.0 | 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 | KOP @ 200' |
| 210.0 | 0.20 | 236.43 | 210.0 | 0.0 | 0.0 | 0.0 | 2.00 | 2.00 | |
| 240.0 | 0.80 | 236.43 | 240.0 | -0.2 | -0.2 | 0.3 | 2.00 | 2.00 | |
| 270.0 | 1.40 | 236.43 | 270.0 | -0.5 | -0.7 | 0.9 | 2.00 | 2.00 | |
| 300.0 | 2.00 | 236.43 | 300.0 | -1.0 | -1.5 | 1.7 | 2.00 | 2.00 | |
| 330.0 | 2.60 | 236.43 | 330.0 | -1.6 | -2.5 | 2.9 | 2.00 | 2.00 | |
| 360.0 | 3.20 | 236.43 | 359.9 | -2.5 | -3.7 | 4.5 | 2.00 | 2.00 | |
| 390.0 | 3.80 | 236.43 | 389.9 | -3.5 | -5.2 | 6.3 | 2.00 | 2.00 | |
| 420.0 | 4.40 | 236.43 | 419.8 | -4.7 | -7.0 | 8.4 | 2.00 | 2.00 | |
| 450.0 | 5.00 | 236.43 | 449.7 | -6.0 | -9.1 | 10.9 | 2.00 | 2.00 | |
| 480.0 | 5.60 | 236.43 | 479.6 | -7.6 | -11.4 | 13.7 | 2.00 | 2.00 | |
| 510.0 | 6.20 | 236.43 | 509.4 | -9.3 | -14.0 | 16.8 | 2.00 | 2.00 | |
| 536.3 | 6.73 | 236.43 | 535.5 | -10.9 | -16.4 | 19.7 | 2.00 | 2.00 | EOB @ Inc. = 6.73° |
| 540.0 | 6.73 | 236.43 | 539.2 | -11.1 | -16.8 | 20.1 | 0.00 | 0.00 | |
| 570.0 | 6.73 | 236.43 | 569.0 | -13.1 | -19.7 | 23.7 | 0.00 | 0.00 | |
| 600.0 | 6.73 | 236.43 | 598.8 | -15.0 | -22.6 | 27.2 | 0.00 | 0.00 | |
| 630.0 | 6.73 | 236.43 | 628.6 | -17.0 | -25.6 | 30.7 | 0.00 | 0.00 | |
| 660.0 | 6.73 | 236.43 | 658.4 | -18.9 | -28.5 | 34.2 | 0.00 | 0.00 | |
| 690.0 | 6.73 | 236.43 | 688.2 | -20.9 | -31.4 | 37.7 | 0.00 | 0.00 | |
| 720.0 | 6.73 | 236.43 | 718.0 | -22.8 | -34.4 | 41.2 | 0.00 | 0.00 | |
| 750.0 | 6.73 | 236.43 | 747.8 | -24.7 | -37.3 | 44.7 | 0.00 | 0.00 | |
| 780.0 | 6.73 | 236.43 | 777.6 | -26.7 | -40.2 | 48.3 | 0.00 | 0.00 | |
| 810.0 | 6.73 | 236.43 | 807.3 | -28.6 | -43.1 | 51.8 | 0.00 | 0.00 | |
| 840.0 | 6.73 | 236.43 | 837.1 | -30.6 | -46.1 | 55.3 | 0.00 | 0.00 | |
| 870.0 | 6.73 | 236.43 | 866.9 | -32.5 | -49.0 | 58.8 | 0.00 | 0.00 | |
| 900.0 | 6.73 | 236.43 | 896.7 | -34.5 | -51.9 | 62.3 | 0.00 | 0.00 | |
| 930.0 | 6.73 | 236.43 | 926.5 | -36.4 | -54.9 | 65.8 | 0.00 | 0.00 | |
| 960.0 | 6.73 | 236.43 | 956.3 | -38.3 | -57.8 | 69.3 | 0.00 | 0.00 | |
| 990.0 | 6.73 | 236.43 | 986.1 | -40.3 | -60.7 | 72.9 | 0.00 | 0.00 | |
| 1,020.0 | 6.73 | 236.43 | 1,015.9 | -42.2 | -63.6 | 76.4 | 0.00 | 0.00 | |
| 1,050.0 | 6.73 | 236.43 | 1,045.7 | -44.2 | -66.6 | 79.9 | 0.00 | 0.00 | |
| 1,080.0 | 6.73 | 236.43 | 1,075.5 | -46.1 | -69.5 | 83.4 | 0.00 | 0.00 | |
| 1,110.0 | 6.73 | 236.43 | 1,105.3 | -48.1 | -72.4 | 86.9 | 0.00 | 0.00 | |
| 1,140.0 | 6.73 | 236.43 | 1,135.1 | -50.0 | -75.3 | 90.4 | 0.00 | 0.00 | |
| 1,170.0 | 6.73 | 236.43 | 1,164.9 | -51.9 | -78.3 | 93.9 | 0.00 | 0.00 | |
| 1,200.0 | 6.73 | 236.43 | 1,194.7 | -53.9 | -81.2 | 97.5 | 0.00 | 0.00 | |
| 1,230.0 | 6.73 | 236.43 | 1,224.5 | -55.8 | -84.1 | 101.0 | 0.00 | 0.00 | |
| 1,260.0 | 6.73 | 236.43 | 1,254.2 | -57.8 | -87.1 | 104.5 | 0.00 | 0.00 | |
| 1,290.0 | 6.73 | 236.43 | 1,284.0 | -59.7 | -90.0 | 108.0 | 0.00 | 0.00 | |
| 1,320.0 | 6.73 | 236.43 | 1,313.8 | -61.7 | -92.9 | 111.5 | 0.00 | 0.00 | |
| 1,350.0 | 6.73 | 236.43 | 1,343.6 | -63.6 | -95.8 | 115.0 | 0.00 | 0.00 | |
| 1,380.0 | 6.73 | 236.43 | 1,373.4 | -65.5 | -98.8 | 118.5 | 0.00 | 0.00 | |
| 1,410.0 | 6.73 | 236.43 | 1,403.2 | -67.5 | -101.7 | 122.1 | 0.00 | 0.00 | |
| 1,440.0 | 6.73 | 236.43 | 1,433.0 | -69.4 | -104.6 | 125.6 | 0.00 | 0.00 | |
| 1,470.0 | 6.73 | 236.43 | 1,462.8 | -71.4 | -107.6 | 129.1 | 0.00 | 0.00 | |
| 1,500.0 | 6.73 | 236.43 | 1,492.6 | -73.3 | -110.5 | 132.6 | 0.00 | 0.00 | |

| | | | |
|---|---|---|---|
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| **Company:** | Berry Petroleum Company (NAD 83) | **TVD Reference:** | Well @ 7896.0ft |
| **Project:** | Garfield County | **MD Reference:** | Well @ 7896.0ft |
| **Site:** | Chevron C-D29-596 | **North Reference:** | True |
| **Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | DD | | |
| **Design:** | Plan #3 | | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| 1,530.0 | 6.73 | 236.43 | 1,522.4 | -75.3 | -113.4 | 136.1 | 0.00 | 0.00 | |
| 1,560.0 | 6.73 | 236.43 | 1,552.2 | -77.2 | -116.3 | 139.6 | 0.00 | 0.00 | |
| 1,590.0 | 6.73 | 236.43 | 1,582.0 | -79.1 | -119.3 | 143.1 | 0.00 | 0.00 | |
| 1,620.0 | 6.73 | 236.43 | 1,611.8 | -81.1 | -122.2 | 146.6 | 0.00 | 0.00 | |
| 1,650.0 | 6.73 | 236.43 | 1,641.6 | -83.0 | -125.1 | 150.2 | 0.00 | 0.00 | |
| 1,680.0 | 6.73 | 236.43 | 1,671.4 | -85.0 | -128.0 | 153.7 | 0.00 | 0.00 | |
| 1,710.0 | 6.73 | 236.43 | 1,701.1 | -86.9 | -131.0 | 157.2 | 0.00 | 0.00 | |
| 1,740.0 | 6.73 | 236.43 | 1,730.9 | -88.9 | -133.9 | 160.7 | 0.00 | 0.00 | |
| 1,770.0 | 6.73 | 236.43 | 1,760.7 | -90.8 | -136.8 | 164.2 | 0.00 | 0.00 | |
| 1,800.0 | 6.73 | 236.43 | 1,790.5 | -92.7 | -139.8 | 167.7 | 0.00 | 0.00 | |
| 1,830.0 | 6.73 | 236.43 | 1,820.3 | -94.7 | -142.7 | 171.2 | 0.00 | 0.00 | |
| 1,860.0 | 6.73 | 236.43 | 1,850.1 | -96.6 | -145.6 | 174.8 | 0.00 | 0.00 | |
| 1,890.0 | 6.73 | 236.43 | 1,879.9 | -98.6 | -148.5 | 178.3 | 0.00 | 0.00 | |
| 1,920.0 | 6.73 | 236.43 | 1,909.7 | -100.5 | -151.5 | 181.8 | 0.00 | 0.00 | |
| 1,950.0 | 6.73 | 236.43 | 1,939.5 | -102.5 | -154.4 | 185.3 | 0.00 | 0.00 | |
| 1,980.0 | 6.73 | 236.43 | 1,969.3 | -104.4 | -157.3 | 188.8 | 0.00 | 0.00 | |
| 2,010.0 | 6.73 | 236.43 | 1,999.1 | -106.3 | -160.3 | 192.3 | 0.00 | 0.00 | |
| 2,040.0 | 6.73 | 236.43 | 2,028.9 | -108.3 | -163.2 | 195.8 | 0.00 | 0.00 | |
| 2,070.0 | 6.73 | 236.43 | 2,058.7 | -110.2 | -166.1 | 199.4 | 0.00 | 0.00 | |
| 2,100.0 | 6.73 | 236.43 | 2,088.5 | -112.2 | -169.0 | 202.9 | 0.00 | 0.00 | |
| 2,130.0 | 6.73 | 236.43 | 2,118.3 | -114.1 | -172.0 | 206.4 | 0.00 | 0.00 | |
| 2,160.0 | 6.73 | 236.43 | 2,148.1 | -116.1 | -174.9 | 209.9 | 0.00 | 0.00 | |
| 2,190.0 | 6.73 | 236.43 | 2,177.8 | -118.0 | -177.8 | 213.4 | 0.00 | 0.00 | |
| 2,220.0 | 6.73 | 236.43 | 2,207.6 | -120.0 | -180.7 | 216.9 | 0.00 | 0.00 | |
| 2,250.0 | 6.73 | 236.43 | 2,237.4 | -121.9 | -183.7 | 220.4 | 0.00 | 0.00 | |
| 2,280.0 | 6.73 | 236.43 | 2,267.2 | -123.8 | -186.6 | 224.0 | 0.00 | 0.00 | |
| 2,310.0 | 6.73 | 236.43 | 2,297.0 | -125.8 | -189.5 | 227.5 | 0.00 | 0.00 | |
| 2,340.0 | 6.73 | 236.43 | 2,326.8 | -127.7 | -192.5 | 231.0 | 0.00 | 0.00 | |
| 2,370.0 | 6.73 | 236.43 | 2,356.6 | -129.7 | -195.4 | 234.5 | 0.00 | 0.00 | |
| 2,400.0 | 6.73 | 236.43 | 2,386.4 | -131.6 | -198.3 | 238.0 | 0.00 | 0.00 | |
| 2,430.0 | 6.73 | 236.43 | 2,416.2 | -133.6 | -201.2 | 241.5 | 0.00 | 0.00 | |
| 2,460.0 | 6.73 | 236.43 | 2,446.0 | -135.5 | -204.2 | 245.0 | 0.00 | 0.00 | |
| 2,490.0 | 6.73 | 236.43 | 2,475.8 | -137.4 | -207.1 | 248.5 | 0.00 | 0.00 | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| Chevron 29-6D BHL | 0.00 | 0.00 | 9,512.0 | -399.9 | -607.1 | 1,650,729.37 | 2,239,311.63 | 39.589004 | -108.199540 |
| - plan misses target center by 7052.5ft at 2490.0ft MD (2475.8 TVD, -137.4 N, -207.1 E) | | | | | | | | | |
| - Rectangle (sides W100.0 H200.0 D0.0) | | | | | | | | | |
| Chevron 29-6D Tgt | 0.00 | 0.00 | 6,362.0 | -379.9 | -572.5 | 1,650,748.34 | 2,239,346.82 | 39.589059 | -108.199417 |
| - plan misses target center by 3910.9ft at 2490.0ft MD (2475.8 TVD, -137.4 N, -207.1 E) | | | | | | | | | |
| - Point | | | | | | | | | |

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.1 US Multi Users DB | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Company:** | Berry Petroleum Company (NAD 83) | **TVD Reference:** | Well @ 7896.0ft |
| **Project:** | Garfield County | **MD Reference:** | Well @ 7896.0ft |
| **Site:** | Chevron C-D29-596 | **North Reference:** | True |
| **Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | DD | | |
| **Design:** | Plan #3 | | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| 2,500.0 | 6.73 | 236.43 | 2,485.7 | -138.1 | -208.1 | 249.7 | 0.00 | 0.00 | |
| 2,600.0 | 6.73 | 236.43 | 2,585.0 | -144.6 | -217.8 | 261.4 | 0.00 | 0.00 | |
| 2,700.0 | 6.73 | 236.43 | 2,684.3 | -151.0 | -227.6 | 273.1 | 0.00 | 0.00 | |
| 2,707.7 | 6.73 | 236.43 | 2,692.0 | -151.5 | -228.3 | 274.1 | 0.00 | 0.00 | Wasatch |
| 2,800.0 | 6.73 | 236.43 | 2,783.6 | -157.5 | -237.4 | 284.9 | 0.00 | 0.00 | |
| 2,900.0 | 6.73 | 236.43 | 2,883.0 | -164.0 | -247.1 | 296.6 | 0.00 | 0.00 | |
| 3,000.0 | 6.73 | 236.43 | 2,982.3 | -170.5 | -256.9 | 308.3 | 0.00 | 0.00 | |
| 3,100.0 | 6.73 | 236.43 | 3,081.6 | -176.9 | -266.6 | 320.0 | 0.00 | 0.00 | |
| 3,200.0 | 6.73 | 236.43 | 3,180.9 | -183.4 | -276.4 | 331.7 | 0.00 | 0.00 | |
| 3,300.0 | 6.73 | 236.43 | 3,280.2 | -189.9 | -286.1 | 343.4 | 0.00 | 0.00 | |
| 3,400.0 | 6.73 | 236.43 | 3,379.5 | -196.4 | -295.9 | 355.1 | 0.00 | 0.00 | |
| 3,500.0 | 6.73 | 236.43 | 3,478.8 | -202.9 | -305.7 | 366.8 | 0.00 | 0.00 | |
| 3,600.0 | 6.73 | 236.43 | 3,578.1 | -209.3 | -315.4 | 378.6 | 0.00 | 0.00 | |
| 3,700.0 | 6.73 | 236.43 | 3,677.5 | -215.8 | -325.2 | 390.3 | 0.00 | 0.00 | |
| 3,800.0 | 6.73 | 236.43 | 3,776.8 | -222.3 | -334.9 | 402.0 | 0.00 | 0.00 | |
| 3,900.0 | 6.73 | 236.43 | 3,876.1 | -228.8 | -344.7 | 413.7 | 0.00 | 0.00 | |
| 4,000.0 | 6.73 | 236.43 | 3,975.4 | -235.2 | -354.5 | 425.4 | 0.00 | 0.00 | |
| 4,100.0 | 6.73 | 236.43 | 4,074.7 | -241.7 | -364.2 | 437.1 | 0.00 | 0.00 | |
| 4,200.0 | 6.73 | 236.43 | 4,174.0 | -248.2 | -374.0 | 448.8 | 0.00 | 0.00 | |
| 4,300.0 | 6.73 | 236.43 | 4,273.3 | -254.7 | -383.7 | 460.6 | 0.00 | 0.00 | |
| 4,400.0 | 6.73 | 236.43 | 4,372.6 | -261.1 | -393.5 | 472.3 | 0.00 | 0.00 | |
| 4,500.0 | 6.73 | 236.43 | 4,471.9 | -267.6 | -403.3 | 484.0 | 0.00 | 0.00 | |
| 4,600.0 | 6.73 | 236.43 | 4,571.3 | -274.1 | -413.0 | 495.7 | 0.00 | 0.00 | |
| 4,661.2 | 6.73 | 236.43 | 4,632.0 | -278.1 | -419.0 | 502.9 | 0.00 | 0.00 | Fort Union |
| 4,700.0 | 6.73 | 236.43 | 4,670.6 | -280.6 | -422.8 | 507.4 | 0.00 | 0.00 | |
| 4,800.0 | 6.73 | 236.43 | 4,769.9 | -287.0 | -432.5 | 519.1 | 0.00 | 0.00 | |
| 4,900.0 | 6.73 | 236.43 | 4,869.2 | -293.5 | -442.3 | 530.8 | 0.00 | 0.00 | |
| 5,000.0 | 6.73 | 236.43 | 4,968.5 | -300.0 | -452.1 | 542.5 | 0.00 | 0.00 | |
| 5,100.0 | 6.73 | 236.43 | 5,067.8 | -306.5 | -461.8 | 554.3 | 0.00 | 0.00 | |
| 5,164.6 | 6.73 | 236.43 | 5,132.0 | -310.7 | -468.1 | 561.8 | 0.00 | 0.00 | Base Ft Union |
| 5,200.0 | 6.73 | 236.43 | 5,167.1 | -313.0 | -471.6 | 566.0 | 0.00 | 0.00 | |
| 5,300.0 | 6.73 | 236.43 | 5,266.4 | -319.4 | -481.3 | 577.7 | 0.00 | 0.00 | |
| 5,400.0 | 6.73 | 236.43 | 5,365.7 | -325.9 | -491.1 | 589.4 | 0.00 | 0.00 | |
| 5,500.0 | 6.73 | 236.43 | 5,465.1 | -332.4 | -500.9 | 601.1 | 0.00 | 0.00 | |
| 5,600.0 | 6.73 | 236.43 | 5,564.4 | -338.9 | -510.6 | 612.8 | 0.00 | 0.00 | |
| 5,700.0 | 6.73 | 236.43 | 5,663.7 | -345.3 | -520.4 | 624.5 | 0.00 | 0.00 | |
| 5,800.0 | 6.73 | 236.43 | 5,763.0 | -351.8 | -530.1 | 636.2 | 0.00 | 0.00 | |
| 5,900.0 | 6.73 | 236.43 | 5,862.3 | -358.3 | -539.9 | 648.0 | 0.00 | 0.00 | |
| 6,000.0 | 6.73 | 236.43 | 5,961.6 | -364.8 | -549.6 | 659.7 | 0.00 | 0.00 | |
| 6,065.3 | 6.73 | 236.43 | 6,026.5 | -369.0 | -556.0 | 667.3 | 0.00 | 0.00 | Start Drop -2.00 |
| 6,100.0 | 6.03 | 236.43 | 6,061.0 | -371.1 | -559.2 | 671.2 | 2.00 | -2.00 | |
| 6,200.0 | 4.03 | 236.43 | 6,160.6 | -376.0 | -566.5 | 679.9 | 2.00 | -2.00 | |
| 6,300.0 | 2.03 | 236.43 | 6,260.4 | -378.9 | -570.9 | 685.2 | 2.00 | -2.00 | |
| 6,400.0 | 0.03 | 236.43 | 6,360.4 | -379.9 | -572.4 | 687.0 | 2.00 | -2.00 | |
| 6,401.6 | 0.00 | 0.00 | 6,362.0 | -379.9 | -572.5 | 687.0 | 2.00 | -2.00 | EOD @ Inc. = 0° - Ohio Creek - Chevron 29-6D |
| 6,500.0 | 0.49 | 239.97 | 6,460.4 | -380.1 | -572.8 | 687.5 | 0.50 | 0.50 | |
| 6,550.5 | 0.74 | 239.97 | 6,510.9 | -380.4 | -573.3 | 688.0 | 0.50 | 0.50 | |
| 6,600.0 | 0.74 | 239.97 | 6,560.4 | -380.7 | -573.8 | 688.6 | 0.00 | 0.00 | |
| 6,601.6 | 0.74 | 239.97 | 6,562.0 | -380.7 | -573.9 | 688.7 | 0.00 | 0.00 | Mesaverde |
| 6,700.0 | 0.74 | 239.97 | 6,660.4 | -381.4 | -575.0 | 689.9 | 0.00 | 0.00 | |
| 6,800.0 | 0.74 | 239.97 | 6,760.4 | -382.0 | -576.1 | 691.2 | 0.00 | 0.00 | |
| 6,801.6 | 0.74 | 239.97 | 6,762.0 | -382.0 | -576.1 | 691.3 | 0.00 | 0.00 | Approx. Top Gas |

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.1 US Multi Users DB | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Company:** | Berry Petroleum Company (NAD 83) | **TVD Reference:** | Well @ 7896.0ft |
| **Project:** | Garfield County | **MD Reference:** | Well @ 7896.0ft |
| **Site:** | Chevron C-D29-596 | **North Reference:** | True |
| **Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | DD | | |
| **Design:** | Plan #3 | | |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| 6,900.0 | 0.74 | 239.97 | 6,860.4 | -382.7 | -577.2 | 692.5 | 0.00 | 0.00 | |
| 7,000.0 | 0.74 | 239.97 | 6,960.4 | -383.3 | -578.3 | 693.8 | 0.00 | 0.00 | |
| 7,100.0 | 0.74 | 239.97 | 7,060.3 | -384.0 | -579.5 | 695.1 | 0.00 | 0.00 | |
| 7,200.0 | 0.74 | 239.97 | 7,160.3 | -384.6 | -580.6 | 696.4 | 0.00 | 0.00 | |
| 7,300.0 | 0.74 | 239.97 | 7,260.3 | -385.3 | -581.7 | 697.7 | 0.00 | 0.00 | |
| 7,400.0 | 0.74 | 239.97 | 7,360.3 | -385.9 | -582.8 | 699.0 | 0.00 | 0.00 | |
| 7,500.0 | 0.74 | 239.97 | 7,460.3 | -386.6 | -584.0 | 700.3 | 0.00 | 0.00 | |
| 7,600.0 | 0.74 | 239.97 | 7,560.3 | -387.2 | -585.1 | 701.6 | 0.00 | 0.00 | |
| 7,700.0 | 0.74 | 239.97 | 7,660.3 | -387.9 | -586.2 | 702.9 | 0.00 | 0.00 | |
| 7,800.0 | 0.74 | 239.97 | 7,760.3 | -388.5 | -587.3 | 704.2 | 0.00 | 0.00 | |
| 7,900.0 | 0.74 | 239.97 | 7,860.3 | -389.2 | -588.5 | 705.5 | 0.00 | 0.00 | |
| 8,000.0 | 0.74 | 239.97 | 7,960.3 | -389.8 | -589.6 | 706.8 | 0.00 | 0.00 | |
| 8,100.0 | 0.74 | 239.97 | 8,060.3 | -390.5 | -590.7 | 708.1 | 0.00 | 0.00 | |
| 8,200.0 | 0.74 | 239.97 | 8,160.3 | -391.1 | -591.8 | 709.4 | 0.00 | 0.00 | |
| 8,300.0 | 0.74 | 239.97 | 8,260.2 | -391.8 | -593.0 | 710.7 | 0.00 | 0.00 | |
| 8,400.0 | 0.74 | 239.97 | 8,360.2 | -392.4 | -594.1 | 712.0 | 0.00 | 0.00 | |
| 8,500.0 | 0.74 | 239.97 | 8,460.2 | -393.1 | -595.2 | 713.3 | 0.00 | 0.00 | |
| 8,600.0 | 0.74 | 239.97 | 8,560.2 | -393.7 | -596.3 | 714.6 | 0.00 | 0.00 | |
| 8,700.0 | 0.74 | 239.97 | 8,660.2 | -394.4 | -597.5 | 715.9 | 0.00 | 0.00 | |
| 8,800.0 | 0.74 | 239.97 | 8,760.2 | -395.0 | -598.6 | 717.2 | 0.00 | 0.00 | |
| 8,900.0 | 0.74 | 239.97 | 8,860.2 | -395.7 | -599.7 | 718.5 | 0.00 | 0.00 | |
| 8,951.8 | 0.74 | 239.97 | 8,912.0 | -396.0 | -600.3 | 719.2 | 0.00 | 0.00 | Cameo |
| 9,000.0 | 0.74 | 239.97 | 8,960.2 | -396.3 | -600.8 | 719.8 | 0.00 | 0.00 | |
| 9,100.0 | 0.74 | 239.97 | 9,060.2 | -397.0 | -602.0 | 721.1 | 0.00 | 0.00 | |
| 9,200.0 | 0.74 | 239.97 | 9,160.2 | -397.6 | -603.1 | 722.4 | 0.00 | 0.00 | |
| 9,300.0 | 0.74 | 239.97 | 9,260.2 | -398.3 | -604.2 | 723.7 | 0.00 | 0.00 | |
| 9,400.0 | 0.74 | 239.97 | 9,360.2 | -398.9 | -605.3 | 725.0 | 0.00 | 0.00 | |
| 9,401.8 | 0.74 | 239.97 | 9,362.0 | -398.9 | -605.4 | 725.0 | 0.00 | 0.00 | Rollins Ss |
| 9,500.0 | 0.74 | 239.97 | 9,460.1 | -399.6 | -606.5 | 726.3 | 0.00 | 0.00 | |
| 9,551.9 | 0.74 | 239.97 | 9,512.0 | -399.9 | -607.1 | 726.9 | 0.00 | 0.00 | Chevron 29-6D BHL |

**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 |
|---|---|---|---|---|---|---|---|---|---|
| Chevron 29-6D BHL<br>- plan hits target center<br>- Rectangle (sides W100.0 H200.0 D0.0) | 0.00 | 0.00 | 9,512.0 | -399.9 | -607.1 | 1,650,729.37 | 2,239,311.63 | 39.589004 | -108.199540 |
| Chevron 29-6D Tgt<br>- plan hits target center<br>- Point | 0.00 | 0.00 | 6,362.0 | -379.9 | -572.5 | 1,650,748.34 | 2,239,346.82 | 39.589059 | -108.199417 |

| | | | |
|---|---|---|---|
| **Database:** | EDM 5000.1 US Multi Users DB | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Company:** | Berry Petroleum Company (NAD 83) | **TVD Reference:** | Well @ 7896.0ft |
| **Project:** | Garfield County | **MD Reference:** | Well @ 7896.0ft |
| **Site:** | Chevron C-D29-596 | **North Reference:** | True |
| **Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Wellbore:** | DD | | |
| **Design:** | Plan #3 | | |

**Formations**

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---|---|---|---|---|---|
| 2,707.7 | 2,692.0 | Wasatch | | | |
| 4,661.2 | 4,632.0 | Fort Union | | | |
| 5,164.6 | 5,132.0 | Base Ft Union | | | |
| 6,401.6 | 6,362.0 | Ohio Creek | | | |
| 6,601.6 | 6,562.0 | Mesaverde | | | |
| 6,801.6 | 6,762.0 | Approx. Top Gas | | | |
| 8,951.8 | 8,912.0 | Cameo | | | |
| 9,401.8 | 9,362.0 | Rollins Ss | | | |

**Plan Annotations**

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates +N/-S (ft) | Local Coordinates +E/-W (ft) | Comment |
|---|---|---|---|---|
| 200.0 | 200.0 | 0.0 | 0.0 | KOP @ 200' |
| 536.3 | 535.5 | -10.9 | -16.4 | EOB @ Inc. = 6.73° |
| 6,065.3 | 6,026.5 | -369.0 | -556.0 | Start Drop -2.00 |
| 6,401.6 | 6,362.0 | -379.9 | -572.5 | EOD @ Inc. = 0° |
| 9,551.9 | 9,512.0 | -399.9 | -607.1 | TD at 9551.9 |

# Berry Petroleum Company (NAD 83)

**Garfield County**
**Chevron C-D29-596**
**Chevron #29-6D**
**DD**
**Plan #3**

# Anticollision Report

**06 January, 2011**

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Reference** Plan #3

| | | | |
|---|---|---|---|
| **Filter type:** | GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference | | |
| **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 1,155.2ft | **Error Surface:** | Elliptical Conic |
| **Warning Levels Evaluated at:** | 2.00 **Sigma** | | |

**Survey Tool Program** **Date** 1/5/2011

| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
|---|---|---|---|---|
| 0.0 | 9,551.9 | Plan #3 (DD) | MWD | Geolink MWD |

**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 |
|---|---|---|---|---|---|---|
| Chevron C-D29-596 | | | | | | |
| Chevron #29-7D - DD - Plan #4 | 200.0 | 200.0 | 90.0 | 89.3 | 139.347 | CC, ES |
| Chevron #29-7D - DD - Plan #4 | 600.0 | 581.0 | 143.3 | 141.3 | 71.445 | SF |
| Chevron #29-11D - DD - DD | 251.7 | 262.1 | 18.5 | 17.6 | 22.440 | CC, ES |
| Chevron #29-11D - DD - DD | 9,551.9 | 9,578.5 | 401.3 | 360.4 | 9.823 | SF |
| Chevron #29-12D - DD - DD | 0.0 | 10.0 | 80.1 | | | |
| Chevron #29-12D - DD - DD | 600.0 | 593.0 | 136.4 | 134.4 | 67.945 | SF |
| Chevron #29-13D - DD - Plan #3 | 200.0 | 200.0 | 30.1 | 29.4 | 46.592 | CC, ES |
| Chevron #29-13D - DD - Plan #3 | 400.0 | 398.2 | 40.0 | 38.7 | 29.581 | SF |
| Chevron #29-14D - DD - Plan #3 | 200.0 | 200.0 | 40.0 | 39.3 | 61.881 | CC, ES |
| Chevron #29-14D - DD - Plan #3 | 9,551.9 | 9,559.6 | 767.8 | 727.8 | 19.187 | SF |
| Chevron #29-15D - DD - DD | 224.1 | 234.6 | 48.5 | 47.7 | 64.105 | CC, ES |
| Chevron #29-15D - DD - DD | 9,300.0 | 9,255.0 | 1,109.9 | 1,070.5 | 28.142 | SF |
| Chevron #29-16D - DD - Plan #3 | 200.0 | 200.0 | 59.9 | 59.3 | 92.779 | CC, ES |
| Chevron #29-16D - DD - Plan #3 | 800.0 | 787.1 | 130.5 | 127.4 | 41.268 | SF |
| Chevron #29-3D - DD - DD | 0.0 | 10.0 | 9.9 | | | |
| Chevron #29-3D - DD - DD | 100.0 | 110.0 | 10.1 | 9.8 | 32.778 | ES |
| Chevron #29-3D - DD - DD | 2,400.0 | 2,407.4 | 85.9 | 74.9 | 7.771 | SF |
| Chevron #29-5D - DD - Plan #3 | 200.0 | 200.0 | 9.9 | 9.2 | 15.284 | CC, ES |
| Chevron #29-5D - DD - Plan #3 | 300.0 | 299.8 | 12.2 | 11.2 | 12.243 | SF |
| Chevron #29-8D - DD - Plan #3 | 200.0 | 200.0 | 70.0 | 69.4 | 108.458 | CC, ES |
| Chevron #29-8D - DD - Plan #3 | 500.0 | 490.1 | 100.2 | 98.5 | 59.731 | SF |

# Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-7D - DD - Plan #4

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 45.57 | 63.0 | 64.3 | 90.0 | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 45.57 | 63.0 | 64.3 | 90.0 | 89.7 | 0.30 | 303.284 | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 45.57 | 63.0 | 64.3 | 90.0 | 89.3 | 0.65 | 139.347 | CC, ES |
| 300.0 | 300.0 | 296.8 | 296.8 | 0.5 | 0.5 | 169.29 | 64.2 | 65.4 | 93.4 | 92.4 | 0.99 | 94.416 | |
| 400.0 | 399.8 | 393.0 | 392.9 | 0.7 | 0.7 | 169.67 | 67.7 | 68.7 | 103.6 | 102.2 | 1.33 | 77.835 | |
| 500.0 | 499.5 | 487.9 | 487.4 | 0.9 | 0.9 | 170.16 | 73.5 | 74.2 | 120.5 | 118.8 | 1.67 | 72.187 | |
| 600.0 | 598.8 | 581.0 | 579.8 | 1.2 | 1.1 | 170.65 | 81.3 | 81.7 | 143.3 | 141.3 | 2.01 | 71.445 | SF |
| 700.0 | 698.1 | 676.7 | 674.6 | 1.4 | 1.4 | 171.00 | 90.9 | 90.9 | 168.5 | 166.2 | 2.35 | 71.797 | |
| 800.0 | 797.4 | 773.4 | 770.4 | 1.7 | 1.7 | 171.26 | 100.7 | 100.2 | 193.8 | 191.1 | 2.69 | 72.040 | |
| 900.0 | 896.7 | 870.2 | 866.2 | 1.9 | 2.0 | 171.46 | 110.5 | 109.5 | 219.1 | 216.1 | 3.03 | 72.226 | |
| 1,000.0 | 996.0 | 966.9 | 962.0 | 2.2 | 2.2 | 171.62 | 120.3 | 118.9 | 244.4 | 241.0 | 3.38 | 72.373 | |
| 1,100.0 | 1,095.3 | 1,063.6 | 1,057.8 | 2.5 | 2.5 | 171.75 | 130.0 | 128.2 | 269.7 | 266.0 | 3.72 | 72.493 | |
| 1,200.0 | 1,194.7 | 1,160.4 | 1,153.6 | 2.7 | 2.8 | 171.85 | 139.8 | 137.5 | 295.1 | 291.0 | 4.06 | 72.592 | |
| 1,300.0 | 1,294.0 | 1,257.1 | 1,249.4 | 3.0 | 3.1 | 171.94 | 149.6 | 146.9 | 320.4 | 316.0 | 4.41 | 72.675 | |
| 1,400.0 | 1,393.3 | 1,353.9 | 1,345.2 | 3.3 | 3.4 | 172.02 | 159.4 | 156.2 | 345.7 | 340.9 | 4.75 | 72.746 | |
| 1,500.0 | 1,492.6 | 1,450.6 | 1,441.0 | 3.5 | 3.7 | 172.09 | 169.2 | 165.5 | 371.0 | 365.9 | 5.10 | 72.808 | |
| 1,600.0 | 1,591.9 | 1,547.3 | 1,536.8 | 3.8 | 4.0 | 172.14 | 178.9 | 174.8 | 396.3 | 390.9 | 5.44 | 72.861 | |
| 1,700.0 | 1,691.2 | 1,644.1 | 1,632.5 | 4.1 | 4.3 | 172.19 | 188.7 | 184.2 | 421.6 | 415.8 | 5.78 | 72.908 | |
| 1,800.0 | 1,790.5 | 1,740.8 | 1,728.3 | 4.4 | 4.5 | 172.24 | 198.5 | 193.5 | 446.9 | 440.8 | 6.13 | 72.950 | |
| 1,900.0 | 1,889.8 | 1,837.6 | 1,824.1 | 4.6 | 4.8 | 172.28 | 208.3 | 202.8 | 472.3 | 465.8 | 6.47 | 72.987 | |
| 2,000.0 | 1,989.2 | 1,934.3 | 1,919.9 | 4.9 | 5.1 | 172.32 | 218.1 | 212.2 | 497.6 | 490.8 | 6.81 | 73.020 | |
| 2,100.0 | 2,088.5 | 2,031.1 | 2,015.7 | 5.2 | 5.4 | 172.35 | 227.8 | 221.5 | 522.9 | 515.7 | 7.16 | 73.050 | |
| 2,200.0 | 2,187.8 | 2,127.8 | 2,111.5 | 5.4 | 5.7 | 172.38 | 237.6 | 230.8 | 548.2 | 540.7 | 7.50 | 73.077 | |
| 2,300.0 | 2,287.1 | 2,224.5 | 2,207.3 | 5.7 | 6.0 | 172.40 | 247.4 | 240.1 | 573.5 | 565.7 | 7.85 | 73.102 | |
| 2,400.0 | 2,386.4 | 2,321.3 | 2,303.1 | 6.0 | 6.3 | 172.43 | 257.2 | 249.5 | 598.8 | 590.6 | 8.19 | 73.125 | |
| 2,500.0 | 2,485.7 | 2,418.0 | 2,398.9 | 6.2 | 6.6 | 172.45 | 267.0 | 258.8 | 624.2 | 615.6 | 8.53 | 73.146 | |
| 2,600.0 | 2,585.0 | 2,514.8 | 2,494.7 | 6.5 | 6.9 | 172.47 | 276.7 | 268.1 | 649.5 | 640.6 | 8.88 | 73.165 | |
| 2,700.0 | 2,684.3 | 2,611.5 | 2,590.5 | 6.8 | 7.2 | 172.49 | 286.5 | 277.5 | 674.8 | 665.6 | 9.22 | 73.183 | |
| 2,800.0 | 2,783.6 | 2,708.2 | 2,686.3 | 7.0 | 7.4 | 172.51 | 296.3 | 286.8 | 700.1 | 690.5 | 9.56 | 73.199 | |
| 2,900.0 | 2,883.0 | 2,805.0 | 2,782.1 | 7.3 | 7.7 | 172.53 | 306.1 | 296.1 | 725.4 | 715.5 | 9.91 | 73.215 | |
| 3,000.0 | 2,982.3 | 2,901.7 | 2,877.9 | 7.6 | 8.0 | 172.54 | 315.9 | 305.4 | 750.7 | 740.5 | 10.25 | 73.229 | |
| 3,100.0 | 3,081.6 | 2,998.5 | 2,973.7 | 7.8 | 8.3 | 172.56 | 325.6 | 314.8 | 776.1 | 765.5 | 10.60 | 73.242 | |
| 3,200.0 | 3,180.9 | 3,095.2 | 3,069.4 | 8.1 | 8.6 | 172.57 | 335.4 | 324.1 | 801.4 | 790.4 | 10.94 | 73.255 | |
| 3,300.0 | 3,280.2 | 3,192.0 | 3,165.2 | 8.4 | 8.9 | 172.58 | 345.2 | 333.4 | 826.7 | 815.4 | 11.28 | 73.266 | |
| 3,400.0 | 3,379.5 | 3,288.7 | 3,261.0 | 8.7 | 9.2 | 172.59 | 355.0 | 342.8 | 852.0 | 840.4 | 11.63 | 73.277 | |
| 3,500.0 | 3,478.8 | 3,385.4 | 3,356.8 | 8.9 | 9.5 | 172.61 | 364.7 | 352.1 | 877.3 | 865.4 | 11.97 | 73.288 | |
| 3,600.0 | 3,578.1 | 3,482.2 | 3,452.6 | 9.2 | 9.8 | 172.62 | 374.5 | 361.4 | 902.6 | 890.3 | 12.31 | 73.298 | |
| 3,700.0 | 3,677.5 | 3,578.9 | 3,548.4 | 9.5 | 10.1 | 172.63 | 384.3 | 370.7 | 928.0 | 915.3 | 12.66 | 73.307 | |
| 3,800.0 | 3,776.8 | 3,675.7 | 3,644.2 | 9.7 | 10.4 | 172.64 | 394.1 | 380.1 | 953.3 | 940.3 | 13.00 | 73.316 | |
| 3,900.0 | 3,876.1 | 3,772.4 | 3,740.0 | 10.0 | 10.6 | 172.65 | 403.9 | 389.4 | 978.6 | 965.2 | 13.35 | 73.324 | |
| 4,000.0 | 3,975.4 | 3,869.2 | 3,835.8 | 10.3 | 10.9 | 172.65 | 413.6 | 398.7 | 1,003.9 | 990.2 | 13.69 | 73.332 | |
| 4,100.0 | 4,074.7 | 3,965.9 | 3,931.6 | 10.5 | 11.2 | 172.66 | 423.4 | 408.1 | 1,029.2 | 1,015.2 | 14.03 | 73.339 | |
| 4,200.0 | 4,174.0 | 4,062.6 | 4,027.4 | 10.8 | 11.5 | 172.67 | 433.2 | 417.4 | 1,054.5 | 1,040.2 | 14.38 | 73.346 | |
| 4,300.0 | 4,273.3 | 4,159.4 | 4,123.2 | 11.1 | 11.8 | 172.68 | 443.0 | 426.7 | 1,079.9 | 1,065.1 | 14.72 | 73.353 | |
| 4,400.0 | 4,372.6 | 4,256.1 | 4,219.0 | 11.3 | 12.1 | 172.68 | 452.8 | 436.0 | 1,105.2 | 1,090.1 | 15.07 | 73.360 | |
| 4,500.0 | 4,471.9 | 4,352.9 | 4,314.8 | 11.6 | 12.4 | 172.69 | 462.5 | 445.4 | 1,130.5 | 1,115.1 | 15.41 | 73.366 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-11D - DD - DD

**Offset Site Error:** 0.0 ft

**Survey Program:** 201-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 | 10.0 | 10.0 | 0.0 | 0.0 | 46.07 | 13.8 | 14.4 | 20.0 | | | | |
| 100.0 | 100.0 | 110.1 | 110.1 | 0.1 | 0.2 | 45.58 | 13.7 | 14.0 | 19.6 | 19.3 | 0.31 | 62.321 | |
| 200.0 | 200.0 | 210.2 | 210.2 | 0.3 | 0.3 | 44.20 | 13.5 | 13.1 | 18.8 | 18.1 | 0.64 | 29.173 | |
| 251.7 | 251.7 | 262.1 | 262.1 | 0.4 | 0.4 | 166.99 | 13.2 | 12.3 | 18.5 | 17.6 | 0.82 | 22.440 | CC, ES |
| 300.0 | 300.0 | 310.3 | 310.3 | 0.5 | 0.5 | 166.17 | 12.9 | 11.3 | 18.8 | 17.9 | 0.99 | 18.982 | |
| 400.0 | 399.8 | 410.4 | 410.3 | 0.7 | 0.7 | 163.10 | 13.1 | 8.2 | 22.0 | 20.7 | 1.35 | 16.316 | |
| 500.0 | 499.5 | 510.7 | 510.4 | 0.9 | 0.9 | 156.84 | 14.2 | 1.9 | 27.3 | 25.6 | 1.73 | 15.793 | |
| 600.0 | 598.8 | 610.9 | 610.1 | 1.2 | 1.1 | 149.78 | 15.4 | -7.7 | 33.9 | 31.7 | 2.16 | 15.683 | |
| 700.0 | 698.1 | 711.1 | 709.6 | 1.4 | 1.4 | 141.57 | 16.4 | -20.1 | 39.9 | 37.2 | 2.66 | 15.006 | |
| 800.0 | 797.4 | 810.6 | 807.8 | 1.7 | 1.7 | 131.18 | 17.0 | -36.0 | 45.4 | 42.2 | 3.25 | 14.001 | |
| 900.0 | 896.7 | 909.9 | 905.4 | 1.9 | 2.0 | 120.50 | 18.6 | -54.5 | 53.2 | 49.3 | 3.88 | 13.692 | |
| 1,000.0 | 996.0 | 1,009.9 | 1,003.3 | 2.2 | 2.4 | 111.27 | 19.7 | -74.4 | 62.0 | 57.5 | 4.52 | 13.730 | |
| 1,100.0 | 1,095.3 | 1,109.4 | 1,100.7 | 2.5 | 2.8 | 103.81 | 19.7 | -94.9 | 71.2 | 66.1 | 5.13 | 13.892 | |
| 1,200.0 | 1,194.7 | 1,209.8 | 1,199.0 | 2.7 | 3.2 | 97.93 | 18.4 | -115.1 | 80.0 | 74.3 | 5.71 | 14.021 | |
| 1,300.0 | 1,294.0 | 1,309.8 | 1,297.2 | 3.0 | 3.5 | 93.61 | 16.6 | -134.3 | 88.6 | 82.3 | 6.26 | 14.148 | |
| 1,400.0 | 1,393.3 | 1,408.8 | 1,394.5 | 3.3 | 3.9 | 91.06 | 15.4 | -151.9 | 97.3 | 90.5 | 6.79 | 14.328 | |
| 1,500.0 | 1,492.6 | 1,508.8 | 1,493.2 | 3.5 | 4.2 | 90.11 | 15.5 | -167.9 | 106.2 | 98.9 | 7.32 | 14.508 | |
| 1,600.0 | 1,591.9 | 1,609.6 | 1,593.0 | 3.8 | 4.5 | 90.08 | 16.1 | -182.4 | 114.7 | 106.8 | 7.86 | 14.594 | |
| 1,700.0 | 1,691.2 | 1,709.7 | 1,692.2 | 4.1 | 4.8 | 90.42 | 16.8 | -196.0 | 122.7 | 114.3 | 8.39 | 14.626 | |
| 1,800.0 | 1,790.5 | 1,809.0 | 1,790.7 | 4.4 | 5.1 | 91.06 | 17.3 | -208.5 | 130.1 | 121.2 | 8.92 | 14.581 | |
| 1,900.0 | 1,889.8 | 1,907.0 | 1,887.9 | 4.6 | 5.4 | 91.87 | 19.1 | -220.9 | 138.7 | 129.2 | 9.45 | 14.668 | |
| 2,000.0 | 1,989.2 | 2,006.9 | 1,986.9 | 4.9 | 5.6 | 92.63 | 21.5 | -233.8 | 147.9 | 137.9 | 9.98 | 14.814 | |
| 2,100.0 | 2,088.5 | 2,108.9 | 2,088.1 | 5.2 | 5.9 | 93.37 | 22.9 | -246.2 | 155.9 | 145.3 | 10.53 | 14.808 | |
| 2,200.0 | 2,187.8 | 2,207.9 | 2,186.3 | 5.4 | 6.2 | 93.78 | 23.6 | -258.6 | 163.5 | 152.4 | 11.06 | 14.783 | |
| 2,300.0 | 2,287.1 | 2,306.9 | 2,284.6 | 5.7 | 6.5 | 94.26 | 24.8 | -270.9 | 171.5 | 159.9 | 11.59 | 14.798 | |
| 2,400.0 | 2,386.4 | 2,404.9 | 2,381.6 | 6.0 | 6.8 | 94.26 | 25.8 | -284.6 | 180.1 | 168.0 | 12.14 | 14.839 | |
| 2,500.0 | 2,485.7 | 2,502.0 | 2,477.4 | 6.2 | 7.1 | 93.64 | 26.9 | -300.5 | 190.0 | 177.3 | 12.68 | 14.979 | |
| 2,600.0 | 2,585.0 | 2,601.9 | 2,575.6 | 6.5 | 7.5 | 92.52 | 27.6 | -318.7 | 200.4 | 187.2 | 13.24 | 15.145 | |
| 2,700.0 | 2,684.3 | 2,703.8 | 2,676.0 | 6.8 | 7.9 | 91.59 | 27.6 | -336.5 | 210.1 | 196.3 | 13.78 | 15.246 | |
| 2,800.0 | 2,783.6 | 2,804.7 | 2,775.4 | 7.0 | 8.2 | 90.72 | 27.0 | -353.8 | 218.9 | 204.6 | 14.32 | 15.286 | |
| 2,900.0 | 2,883.0 | 2,905.1 | 2,874.4 | 7.3 | 8.5 | 90.09 | 26.1 | -370.2 | 227.2 | 212.4 | 14.86 | 15.290 | |
| 3,000.0 | 2,982.3 | 3,002.6 | 2,970.6 | 7.6 | 8.9 | 89.53 | 25.5 | -386.1 | 235.7 | 220.3 | 15.40 | 15.312 | |
| 3,100.0 | 3,081.6 | 3,100.9 | 3,067.4 | 7.8 | 9.2 | 88.95 | 25.8 | -403.2 | 245.6 | 229.7 | 15.93 | 15.421 | |
| 3,200.0 | 3,180.9 | 3,199.3 | 3,164.5 | 8.1 | 9.6 | 88.53 | 26.0 | -419.5 | 255.0 | 238.6 | 16.46 | 15.493 | |
| 3,300.0 | 3,280.2 | 3,297.6 | 3,261.2 | 8.4 | 9.9 | 88.10 | 27.3 | -436.8 | 265.9 | 248.9 | 16.99 | 15.649 | |
| 3,400.0 | 3,379.5 | 3,397.3 | 3,359.5 | 8.7 | 10.3 | 87.76 | 28.2 | -453.7 | 276.1 | 258.6 | 17.53 | 15.752 | |
| 3,500.0 | 3,478.8 | 3,497.3 | 3,458.0 | 8.9 | 10.6 | 87.44 | 29.5 | -470.9 | 286.7 | 268.7 | 18.06 | 15.876 | |
| 3,600.0 | 3,578.1 | 3,596.7 | 3,556.0 | 9.2 | 10.9 | 87.21 | 30.5 | -487.4 | 296.9 | 278.3 | 18.60 | 15.964 | |
| 3,700.0 | 3,677.5 | 3,697.2 | 3,655.0 | 9.5 | 11.3 | 86.98 | 31.7 | -504.3 | 307.2 | 288.0 | 19.13 | 16.055 | |
| 3,800.0 | 3,776.8 | 3,795.9 | 3,752.3 | 9.7 | 11.6 | 86.76 | 32.5 | -520.7 | 317.2 | 297.6 | 19.67 | 16.126 | |
| 3,900.0 | 3,876.1 | 3,897.2 | 3,852.2 | 10.0 | 12.0 | 86.48 | 33.2 | -537.9 | 327.3 | 307.1 | 20.21 | 16.197 | |
| 4,000.0 | 3,975.4 | 3,997.7 | 3,951.4 | 10.3 | 12.3 | 86.29 | 33.7 | -554.4 | 336.8 | 316.1 | 20.74 | 16.238 | |
| 4,100.0 | 4,074.7 | 4,104.9 | 4,057.4 | 10.5 | 12.6 | 86.36 | 34.2 | -569.9 | 345.2 | 323.9 | 21.28 | 16.219 | |
| 4,200.0 | 4,174.0 | 4,212.4 | 4,164.2 | 10.8 | 12.9 | 86.98 | 34.7 | -581.2 | 351.3 | 329.4 | 21.83 | 16.088 | |
| 4,300.0 | 4,273.3 | 4,317.1 | 4,268.6 | 11.1 | 13.1 | 87.81 | 34.5 | -590.0 | 355.5 | 333.1 | 22.38 | 15.886 | |
| 4,400.0 | 4,372.6 | 4,422.2 | 4,373.5 | 11.3 | 13.2 | 89.07 | 35.0 | -595.8 | 358.7 | 335.8 | 22.92 | 15.653 | |
| 4,500.0 | 4,471.9 | 4,529.6 | 4,480.9 | 11.6 | 13.4 | 90.86 | 35.5 | -597.7 | 360.1 | 336.7 | 23.46 | 15.351 | |
| 4,600.0 | 4,571.3 | 4,630.7 | 4,582.0 | 11.9 | 13.5 | 92.82 | 35.6 | -597.2 | 360.3 | 336.3 | 23.98 | 15.023 | |
| 4,700.0 | 4,670.6 | 4,730.4 | 4,681.7 | 12.2 | 13.5 | 94.75 | 35.6 | -596.6 | 360.8 | 336.4 | 24.49 | 14.735 | |
| 4,800.0 | 4,769.9 | 4,828.1 | 4,779.4 | 12.4 | 13.6 | 96.73 | 36.0 | -595.6 | 361.9 | 336.9 | 24.96 | 14.497 | |
| 4,900.0 | 4,869.2 | 4,924.7 | 4,875.9 | 12.7 | 13.7 | 98.81 | 37.3 | -594.1 | 364.0 | 338.5 | 25.42 | 14.317 | |
| 5,000.0 | 4,968.5 | 5,023.3 | 4,974.5 | 13.0 | 13.8 | 100.78 | 38.7 | -593.3 | 367.0 | 341.1 | 25.87 | 14.186 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-11D - DD - DD

**Offset Site Error:** 0.0 ft

**Survey Program:** 201-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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,100.0 | 5,067.8 | 5,123.2 | 5,074.5 | 13.2 | 13.9 | 102.66 | 39.9 | -593.2 | 370.4 | 344.1 | 26.31 | 14.081 | |
| 5,200.0 | 5,167.1 | 5,223.4 | 5,174.6 | 13.5 | 14.0 | 104.48 | 40.7 | -593.0 | 374.0 | 347.2 | 26.73 | 13.993 | |
| 5,300.0 | 5,266.4 | 5,329.1 | 5,280.4 | 13.8 | 14.2 | 106.19 | 40.3 | -593.7 | 376.9 | 349.8 | 27.16 | 13.879 | |
| 5,400.0 | 5,365.7 | 5,430.8 | 5,382.0 | 14.0 | 14.3 | 107.70 | 38.6 | -594.6 | 379.0 | 351.4 | 27.57 | 13.747 | |
| 5,500.0 | 5,465.1 | 5,528.9 | 5,480.2 | 14.3 | 14.4 | 109.16 | 36.8 | -595.4 | 381.1 | 353.2 | 27.96 | 13.633 | |
| 5,600.0 | 5,564.4 | 5,625.8 | 5,577.0 | 14.6 | 14.5 | 110.62 | 35.7 | -596.1 | 384.2 | 355.9 | 28.33 | 13.562 | |
| 5,700.0 | 5,663.7 | 5,725.7 | 5,676.9 | 14.8 | 14.7 | 112.11 | 34.7 | -596.8 | 387.7 | 359.0 | 28.69 | 13.511 | |
| 5,800.0 | 5,763.0 | 5,825.0 | 5,776.2 | 15.1 | 14.8 | 113.53 | 33.8 | -597.7 | 391.5 | 362.4 | 29.05 | 13.475 | |
| 5,900.0 | 5,862.3 | 5,924.4 | 5,875.6 | 15.4 | 14.9 | 114.90 | 32.7 | -598.8 | 395.4 | 366.0 | 29.40 | 13.450 | |
| 6,000.0 | 5,961.6 | 6,022.4 | 5,973.6 | 15.7 | 15.1 | 116.19 | 31.9 | -600.1 | 399.9 | 370.1 | 29.74 | 13.444 | |
| 6,100.0 | 6,061.0 | 6,120.5 | 6,071.6 | 15.9 | 15.2 | 117.41 | 31.4 | -601.8 | 404.7 | 374.7 | 30.08 | 13.454 | |
| 6,200.0 | 6,160.6 | 6,219.0 | 6,170.1 | 16.1 | 15.4 | 118.30 | 31.2 | -603.7 | 408.9 | 378.5 | 30.39 | 13.453 | |
| 6,300.0 | 6,260.4 | 6,318.2 | 6,269.3 | 16.3 | 15.5 | 118.76 | 31.2 | -605.3 | 411.6 | 380.9 | 30.68 | 13.417 | |
| 6,400.0 | 6,360.4 | 6,417.2 | 6,368.3 | 16.4 | 15.6 | 118.77 | 31.5 | -607.0 | 412.8 | 381.9 | 30.94 | 13.341 | |
| 6,500.0 | 6,460.4 | 6,518.3 | 6,469.3 | 16.5 | 15.8 | 115.07 | 31.8 | -608.5 | 413.5 | 382.2 | 31.23 | 13.238 | |
| 6,600.0 | 6,560.4 | 6,626.5 | 6,577.6 | 16.7 | 15.9 | 115.01 | 31.1 | -610.1 | 413.5 | 382.0 | 31.53 | 13.114 | |
| 6,700.0 | 6,660.4 | 6,730.1 | 6,681.2 | 16.8 | 16.1 | 115.05 | 28.5 | -610.8 | 411.6 | 379.8 | 31.81 | 12.938 | |
| 6,800.0 | 6,760.4 | 6,829.0 | 6,780.0 | 17.0 | 16.2 | 115.09 | 26.0 | -611.5 | 409.6 | 377.5 | 32.09 | 12.763 | |
| 6,900.0 | 6,860.4 | 6,927.4 | 6,878.4 | 17.1 | 16.4 | 115.10 | 23.8 | -612.4 | 408.0 | 375.6 | 32.38 | 12.602 | |
| 7,000.0 | 6,960.4 | 7,027.1 | 6,978.0 | 17.2 | 16.5 | 115.06 | 21.8 | -613.6 | 406.7 | 374.0 | 32.67 | 12.447 | |
| 7,100.0 | 7,060.3 | 7,127.3 | 7,078.2 | 17.4 | 16.6 | 114.96 | 19.7 | -615.4 | 405.3 | 372.3 | 32.98 | 12.291 | |
| 7,200.0 | 7,160.3 | 7,226.3 | 7,177.1 | 17.5 | 16.8 | 114.83 | 17.7 | -617.3 | 404.0 | 370.8 | 33.28 | 12.139 | |
| 7,300.0 | 7,260.3 | 7,324.5 | 7,275.3 | 17.6 | 17.0 | 114.68 | 16.1 | -619.4 | 403.1 | 369.5 | 33.59 | 12.000 | |
| 7,400.0 | 7,360.3 | 7,423.7 | 7,374.5 | 17.8 | 17.1 | 114.52 | 14.7 | -621.5 | 402.5 | 368.6 | 33.90 | 11.873 | |
| 7,500.0 | 7,460.3 | 7,524.4 | 7,475.1 | 17.9 | 17.3 | 114.40 | 13.4 | -623.5 | 401.9 | 367.7 | 34.21 | 11.749 | |
| 7,600.0 | 7,560.3 | 7,624.0 | 7,574.8 | 18.1 | 17.4 | 114.29 | 12.1 | -625.3 | 401.3 | 366.8 | 34.52 | 11.626 | |
| 7,700.0 | 7,660.3 | 7,723.1 | 7,673.8 | 18.2 | 17.6 | 114.21 | 10.9 | -626.9 | 400.8 | 366.0 | 34.82 | 11.511 | |
| 7,800.0 | 7,760.3 | 7,822.2 | 7,772.9 | 18.4 | 17.7 | 114.14 | 10.1 | -628.5 | 400.7 | 365.6 | 35.12 | 11.408 | |
| 7,900.0 | 7,860.3 | 7,923.3 | 7,874.0 | 18.5 | 17.9 | 114.07 | 9.0 | -630.0 | 400.4 | 364.9 | 35.43 | 11.300 | |
| 8,000.0 | 7,960.3 | 8,022.7 | 7,973.4 | 18.7 | 18.0 | 114.04 | 8.0 | -631.4 | 400.0 | 364.3 | 35.73 | 11.195 | |
| 8,100.0 | 8,060.3 | 8,122.1 | 8,072.7 | 18.8 | 18.2 | 113.94 | 7.1 | -633.2 | 399.9 | 363.8 | 36.05 | 11.093 | |
| 8,133.6 | 8,093.8 | 8,155.3 | 8,106.0 | 18.8 | 18.2 | 113.89 | 6.9 | -633.9 | 399.8 | 363.7 | 36.15 | 11.060 | |
| 8,200.0 | 8,160.3 | 8,221.2 | 8,171.8 | 18.9 | 18.3 | 113.79 | 6.4 | -635.3 | 399.9 | 363.5 | 36.36 | 10.998 | |
| 8,300.0 | 8,260.2 | 8,319.9 | 8,270.5 | 19.1 | 18.5 | 113.70 | 5.9 | -637.1 | 400.1 | 363.5 | 36.67 | 10.912 | |
| 8,400.0 | 8,360.2 | 8,419.6 | 8,370.2 | 19.2 | 18.6 | 113.59 | 5.8 | -639.0 | 400.7 | 363.8 | 36.99 | 10.835 | |
| 8,500.0 | 8,460.2 | 8,519.9 | 8,470.5 | 19.4 | 18.8 | 113.47 | 5.5 | -641.0 | 401.2 | 363.9 | 37.30 | 10.755 | |
| 8,600.0 | 8,560.2 | 8,619.2 | 8,569.8 | 19.5 | 19.0 | 113.38 | 5.3 | -642.9 | 401.7 | 364.1 | 37.61 | 10.680 | |
| 8,700.0 | 8,660.2 | 8,718.6 | 8,669.2 | 19.7 | 19.1 | 113.34 | 5.3 | -644.3 | 402.4 | 364.5 | 37.92 | 10.612 | |
| 8,800.0 | 8,760.2 | 8,817.1 | 8,767.7 | 19.8 | 19.3 | 113.29 | 5.5 | -645.9 | 403.3 | 365.1 | 38.23 | 10.550 | |
| 8,900.0 | 8,860.2 | 8,916.0 | 8,866.6 | 20.0 | 19.4 | 113.23 | 6.1 | -647.6 | 404.6 | 366.1 | 38.54 | 10.499 | |
| 9,000.0 | 8,960.2 | 9,018.4 | 8,968.9 | 20.1 | 19.6 | 113.13 | 6.6 | -649.6 | 405.8 | 367.0 | 38.86 | 10.443 | |
| 9,100.0 | 9,060.2 | 9,123.2 | 9,073.6 | 20.3 | 19.8 | 112.91 | 6.0 | -652.4 | 406.1 | 366.9 | 39.21 | 10.357 | |
| 9,200.0 | 9,160.2 | 9,225.5 | 9,175.9 | 20.4 | 20.0 | 112.50 | 4.3 | -656.3 | 405.5 | 365.9 | 39.57 | 10.246 | |
| 9,300.0 | 9,260.2 | 9,327.1 | 9,277.3 | 20.6 | 20.1 | 112.01 | 2.0 | -660.7 | 404.3 | 364.4 | 39.94 | 10.124 | |
| 9,400.0 | 9,360.2 | 9,426.5 | 9,376.6 | 20.7 | 20.3 | 111.52 | -0.3 | -665.1 | 403.2 | 362.9 | 40.30 | 10.004 | |
| 9,500.0 | 9,460.1 | 9,527.3 | 9,477.3 | 20.9 | 20.5 | 111.02 | -2.7 | -669.5 | 401.9 | 361.2 | 40.66 | 9.883 | |
| 9,551.9 | 9,512.0 | 9,578.5 | 9,528.4 | 21.0 | 20.6 | 110.77 | -3.9 | -671.7 | 401.3 | 360.4 | 40.85 | 9.823 | SF |

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-12D - DD - DD

**Offset Site Error:** 0.0 ft

**Survey Program:** 199-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 | 10.0 | 10.0 | 0.0 | 0.0 | 45.56 | 56.1 | 57.2 | 80.1 | | | | |
| 100.0 | 100.0 | 109.5 | 109.5 | 0.1 | 0.2 | 45.68 | 56.2 | 57.6 | 80.5 | 80.1 | 0.31 | 256.392 | |
| 200.0 | 200.0 | 208.9 | 208.9 | 0.3 | 0.3 | 45.99 | 56.5 | 58.5 | 81.3 | 80.7 | 0.64 | 126.773 | |
| 300.0 | 300.0 | 306.7 | 306.6 | 0.5 | 0.5 | 170.55 | 57.4 | 61.1 | 85.6 | 84.6 | 0.99 | 86.820 | |
| 400.0 | 399.8 | 403.0 | 402.8 | 0.7 | 0.7 | 172.11 | 59.7 | 66.3 | 96.4 | 95.1 | 1.33 | 72.522 | |
| 500.0 | 499.5 | 498.6 | 498.0 | 0.9 | 0.9 | 173.62 | 63.8 | 73.8 | 113.7 | 112.1 | 1.67 | 68.121 | |
| 600.0 | 598.8 | 593.0 | 591.8 | 1.2 | 1.2 | 175.00 | 69.1 | 83.3 | 136.4 | 134.4 | 2.01 | 67.945 | SF |
| 700.0 | 698.1 | 687.0 | 684.9 | 1.4 | 1.4 | 175.95 | 75.7 | 94.1 | 161.2 | 158.9 | 2.34 | 68.774 | |
| 800.0 | 797.4 | 779.7 | 776.5 | 1.7 | 1.7 | 176.61 | 83.4 | 106.3 | 188.1 | 185.5 | 2.68 | 70.255 | |
| 900.0 | 896.7 | 874.3 | 869.6 | 1.9 | 2.0 | 177.05 | 92.3 | 119.8 | 216.6 | 213.6 | 3.01 | 71.875 | |
| 1,000.0 | 996.0 | 975.0 | 969.0 | 2.2 | 2.4 | 177.53 | 101.0 | 133.8 | 244.4 | 241.0 | 3.36 | 72.715 | |
| 1,100.0 | 1,095.3 | 1,076.6 | 1,069.6 | 2.5 | 2.7 | 178.10 | 107.6 | 146.4 | 269.8 | 266.0 | 3.71 | 72.694 | |
| 1,200.0 | 1,194.7 | 1,175.3 | 1,167.4 | 2.7 | 2.9 | 178.64 | 113.1 | 158.2 | 294.3 | 290.2 | 4.06 | 72.552 | |
| 1,300.0 | 1,294.0 | 1,272.1 | 1,263.5 | 3.0 | 3.2 | 179.16 | 117.9 | 169.6 | 318.3 | 313.9 | 4.40 | 72.360 | |
| 1,400.0 | 1,393.3 | 1,367.9 | 1,358.4 | 3.3 | 3.5 | 179.63 | 122.9 | 181.3 | 342.8 | 338.1 | 4.74 | 72.348 | |
| 1,500.0 | 1,492.6 | 1,469.8 | 1,459.4 | 3.5 | 3.8 | 179.98 | 128.4 | 193.2 | 367.1 | 362.0 | 5.09 | 72.138 | |
| 1,600.0 | 1,591.9 | 1,576.1 | 1,565.1 | 3.8 | 4.0 | -179.82 | 133.4 | 203.3 | 389.2 | 383.8 | 5.45 | 71.478 | |
| 1,700.0 | 1,691.2 | 1,677.0 | 1,665.6 | 4.1 | 4.3 | -179.71 | 137.8 | 211.2 | 409.7 | 403.9 | 5.79 | 70.710 | |
| 1,800.0 | 1,790.5 | 1,770.4 | 1,758.7 | 4.4 | 4.5 | -179.58 | 141.5 | 218.8 | 430.4 | 424.2 | 6.13 | 70.205 | |
| 1,900.0 | 1,889.8 | 1,869.2 | 1,857.0 | 4.6 | 4.7 | -179.45 | 145.9 | 227.5 | 451.8 | 445.3 | 6.48 | 69.765 | |
| 2,000.0 | 1,989.2 | 1,965.0 | 1,952.3 | 4.9 | 5.0 | -179.32 | 150.0 | 235.8 | 472.9 | 466.1 | 6.82 | 69.389 | |
| 2,100.0 | 2,088.5 | 2,057.3 | 2,044.1 | 5.2 | 5.2 | -179.21 | 154.2 | 244.5 | 494.9 | 487.8 | 7.15 | 69.222 | |
| 2,200.0 | 2,187.8 | 2,155.2 | 2,141.4 | 5.4 | 5.5 | -179.13 | 159.4 | 254.1 | 517.6 | 510.1 | 7.49 | 69.080 | |
| 2,300.0 | 2,287.1 | 2,253.2 | 2,238.8 | 5.7 | 5.7 | -179.14 | 165.1 | 263.0 | 539.9 | 532.1 | 7.83 | 68.920 | |
| 2,400.0 | 2,386.4 | 2,347.6 | 2,332.7 | 6.0 | 6.0 | -179.20 | 171.0 | 271.4 | 562.4 | 554.2 | 8.17 | 68.834 | |
| 2,500.0 | 2,485.7 | 2,439.2 | 2,423.7 | 6.2 | 6.2 | -179.19 | 176.6 | 280.8 | 585.8 | 577.3 | 8.50 | 68.889 | |
| 2,600.0 | 2,585.0 | 2,536.7 | 2,520.3 | 6.5 | 6.5 | -178.97 | 181.2 | 292.3 | 609.9 | 601.0 | 8.85 | 68.927 | |
| 2,700.0 | 2,684.3 | 2,633.8 | 2,616.7 | 6.8 | 6.8 | -178.78 | 185.6 | 303.3 | 633.4 | 624.2 | 9.19 | 68.909 | |
| 2,800.0 | 2,783.6 | 2,734.7 | 2,716.8 | 7.0 | 7.0 | -178.58 | 190.2 | 315.2 | 657.4 | 647.8 | 9.54 | 68.902 | |
| 2,900.0 | 2,883.0 | 2,836.1 | 2,817.5 | 7.3 | 7.3 | -178.44 | 194.5 | 325.6 | 679.9 | 670.0 | 9.89 | 68.730 | |
| 3,000.0 | 2,982.3 | 2,926.3 | 2,907.1 | 7.6 | 7.5 | -178.28 | 198.1 | 335.7 | 703.0 | 692.8 | 10.22 | 68.767 | |
| 3,100.0 | 3,081.6 | 3,013.7 | 2,993.8 | 7.8 | 7.8 | -178.19 | 202.9 | 345.8 | 727.2 | 716.7 | 10.55 | 68.943 | |
| 3,200.0 | 3,180.9 | 3,110.5 | 3,089.7 | 8.1 | 8.1 | -178.12 | 208.8 | 357.9 | 752.7 | 741.8 | 10.89 | 69.109 | |
| 3,300.0 | 3,280.2 | 3,208.2 | 3,186.6 | 8.4 | 8.4 | -177.97 | 213.5 | 369.9 | 777.1 | 765.9 | 11.24 | 69.161 | |
| 3,400.0 | 3,379.5 | 3,304.0 | 3,281.4 | 8.7 | 8.7 | -177.78 | 217.9 | 382.7 | 802.3 | 790.8 | 11.58 | 69.301 | |
| 3,500.0 | 3,478.8 | 3,411.0 | 3,387.4 | 8.9 | 9.0 | -177.65 | 223.0 | 395.7 | 826.7 | 814.8 | 11.94 | 69.256 | |
| 3,600.0 | 3,578.1 | 3,518.4 | 3,494.1 | 9.2 | 9.2 | -177.58 | 228.2 | 407.2 | 849.9 | 837.6 | 12.30 | 69.112 | |
| 3,700.0 | 3,677.5 | 3,608.7 | 3,583.8 | 9.5 | 9.5 | -177.53 | 232.5 | 416.5 | 872.8 | 860.2 | 12.63 | 69.114 | |
| 3,800.0 | 3,776.8 | 3,708.6 | 3,683.0 | 9.7 | 9.7 | -177.51 | 237.9 | 427.1 | 896.2 | 883.3 | 12.98 | 69.074 | |
| 3,900.0 | 3,876.1 | 3,793.8 | 3,767.5 | 10.0 | 10.0 | -177.49 | 242.6 | 436.3 | 919.9 | 906.6 | 13.30 | 69.176 | |
| 4,000.0 | 3,975.4 | 3,897.5 | 3,870.4 | 10.3 | 10.3 | -177.46 | 248.6 | 448.2 | 944.2 | 930.6 | 13.65 | 69.174 | |
| 4,100.0 | 4,074.7 | 3,987.9 | 3,960.1 | 10.5 | 10.5 | -177.46 | 254.0 | 458.1 | 968.2 | 954.2 | 13.98 | 69.249 | |
| 4,200.0 | 4,174.0 | 4,095.2 | 4,066.6 | 10.8 | 10.8 | -177.44 | 260.2 | 470.0 | 992.2 | 977.8 | 14.34 | 69.191 | |
| 4,300.0 | 4,273.3 | 4,198.1 | 4,168.8 | 11.1 | 11.1 | -177.41 | 265.4 | 480.6 | 1,015.2 | 1,000.5 | 14.69 | 69.097 | |
| 4,400.0 | 4,372.6 | 4,290.1 | 4,260.2 | 11.3 | 11.4 | -177.38 | 270.0 | 490.2 | 1,038.3 | 1,023.2 | 15.03 | 69.096 | |
| 4,500.0 | 4,471.9 | 4,377.0 | 4,346.4 | 11.6 | 11.6 | -177.35 | 274.7 | 500.2 | 1,062.4 | 1,047.0 | 15.35 | 69.201 | |
| 4,600.0 | 4,571.3 | 4,481.6 | 4,450.1 | 11.9 | 11.9 | -177.31 | 280.4 | 512.3 | 1,086.7 | 1,071.0 | 15.71 | 69.186 | |
| 4,700.0 | 4,670.6 | 4,583.5 | 4,551.4 | 12.2 | 12.2 | -177.33 | 286.5 | 522.5 | 1,109.9 | 1,093.8 | 16.06 | 69.127 | |
| 4,800.0 | 4,769.9 | 4,662.0 | 4,629.2 | 12.4 | 12.4 | -177.38 | 291.8 | 530.7 | 1,133.8 | 1,117.4 | 16.36 | 69.287 | |

# Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-13D - DD - Plan #3

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 45.39 | 21.1 | 21.4 | 30.1 | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 45.39 | 21.1 | 21.4 | 30.1 | 29.8 | 0.30 | 101.406 | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 45.39 | 21.1 | 21.4 | 30.1 | 29.4 | 0.65 | 46.592 | CC, ES |
| 300.0 | 300.0 | 299.7 | 299.7 | 0.5 | 0.5 | 172.59 | 20.1 | 22.8 | 32.2 | 31.2 | 1.00 | 32.258 | |
| 400.0 | 399.8 | 398.2 | 398.1 | 0.7 | 0.7 | 179.52 | 18.5 | 27.3 | 40.0 | 38.7 | 1.35 | 29.581 | SF |
| 500.0 | 499.5 | 495.5 | 495.0 | 0.9 | 0.9 | -175.06 | 17.6 | 34.9 | 54.9 | 53.2 | 1.71 | 32.185 | |
| 600.0 | 598.8 | 593.2 | 592.2 | 1.2 | 1.1 | -171.85 | 17.1 | 44.6 | 74.8 | 72.8 | 2.06 | 36.287 | |
| 700.0 | 698.1 | 691.1 | 689.6 | 1.4 | 1.4 | -170.02 | 16.7 | 54.3 | 95.1 | 92.7 | 2.42 | 39.292 | |
| 800.0 | 797.4 | 788.9 | 787.1 | 1.7 | 1.6 | -168.83 | 16.2 | 64.0 | 115.5 | 112.7 | 2.78 | 41.532 | |
| 900.0 | 896.7 | 886.8 | 884.5 | 1.9 | 1.8 | -168.00 | 15.7 | 73.7 | 135.8 | 132.7 | 3.14 | 43.261 | |
| 1,000.0 | 996.0 | 984.7 | 981.9 | 2.2 | 2.1 | -167.38 | 15.3 | 83.4 | 156.2 | 152.7 | 3.50 | 44.635 | |
| 1,100.0 | 1,095.3 | 1,082.6 | 1,079.3 | 2.5 | 2.3 | -166.91 | 14.8 | 93.1 | 176.7 | 172.8 | 3.86 | 45.752 | |
| 1,200.0 | 1,194.7 | 1,180.5 | 1,176.7 | 2.7 | 2.5 | -166.53 | 14.3 | 102.8 | 197.1 | 192.9 | 4.22 | 46.678 | |
| 1,300.0 | 1,294.0 | 1,278.4 | 1,274.1 | 3.0 | 2.8 | -166.23 | 13.8 | 112.5 | 217.5 | 212.9 | 4.58 | 47.456 | |
| 1,400.0 | 1,393.3 | 1,376.3 | 1,371.5 | 3.3 | 3.0 | -165.97 | 13.4 | 122.2 | 237.9 | 233.0 | 4.94 | 48.121 | |
| 1,500.0 | 1,492.6 | 1,474.1 | 1,468.9 | 3.5 | 3.3 | -165.76 | 12.9 | 131.9 | 258.4 | 253.1 | 5.31 | 48.694 | |
| 1,600.0 | 1,591.9 | 1,572.0 | 1,566.3 | 3.8 | 3.5 | -165.58 | 12.4 | 141.6 | 278.8 | 273.1 | 5.67 | 49.194 | |
| 1,700.0 | 1,691.2 | 1,669.9 | 1,663.7 | 4.1 | 3.7 | -165.42 | 11.9 | 151.3 | 299.2 | 293.2 | 6.03 | 49.633 | |
| 1,800.0 | 1,790.5 | 1,767.8 | 1,761.1 | 4.4 | 4.0 | -165.29 | 11.5 | 161.0 | 319.7 | 313.3 | 6.39 | 50.023 | |
| 1,900.0 | 1,889.8 | 1,865.7 | 1,858.5 | 4.6 | 4.2 | -165.17 | 11.0 | 170.7 | 340.1 | 333.4 | 6.75 | 50.370 | |
| 2,000.0 | 1,989.2 | 1,963.6 | 1,955.9 | 4.9 | 4.5 | -165.06 | 10.5 | 180.4 | 360.6 | 353.5 | 7.11 | 50.682 | |
| 2,100.0 | 2,088.5 | 2,061.5 | 2,053.3 | 5.2 | 4.7 | -164.97 | 10.1 | 190.1 | 381.0 | 373.6 | 7.48 | 50.963 | |
| 2,200.0 | 2,187.8 | 2,159.3 | 2,150.7 | 5.4 | 4.9 | -164.88 | 9.6 | 199.8 | 401.5 | 393.6 | 7.84 | 51.219 | |
| 2,300.0 | 2,287.1 | 2,257.2 | 2,248.1 | 5.7 | 5.2 | -164.80 | 9.1 | 209.5 | 421.9 | 413.7 | 8.20 | 51.451 | |
| 2,400.0 | 2,386.4 | 2,355.1 | 2,345.5 | 6.0 | 5.4 | -164.73 | 8.6 | 219.2 | 442.4 | 433.8 | 8.56 | 51.664 | |
| 2,500.0 | 2,485.7 | 2,453.0 | 2,442.9 | 6.2 | 5.7 | -164.67 | 8.2 | 228.9 | 462.8 | 453.9 | 8.92 | 51.860 | |
| 2,600.0 | 2,585.0 | 2,550.9 | 2,540.3 | 6.5 | 5.9 | -164.61 | 7.7 | 238.6 | 483.3 | 474.0 | 9.29 | 52.040 | |
| 2,700.0 | 2,684.3 | 2,648.8 | 2,637.7 | 6.8 | 6.1 | -164.56 | 7.2 | 248.3 | 503.7 | 494.1 | 9.65 | 52.206 | |
| 2,800.0 | 2,783.6 | 2,746.7 | 2,735.1 | 7.0 | 6.4 | -164.51 | 6.8 | 258.0 | 524.2 | 514.2 | 10.01 | 52.361 | |
| 2,900.0 | 2,883.0 | 2,844.5 | 2,832.5 | 7.3 | 6.6 | -164.46 | 6.3 | 267.7 | 544.6 | 534.3 | 10.37 | 52.505 | |
| 3,000.0 | 2,982.3 | 2,942.4 | 2,929.9 | 7.6 | 6.9 | -164.42 | 5.8 | 277.4 | 565.1 | 554.3 | 10.74 | 52.638 | |
| 3,100.0 | 3,081.6 | 3,040.3 | 3,027.3 | 7.8 | 7.1 | -164.38 | 5.3 | 287.1 | 585.5 | 574.4 | 11.10 | 52.764 | |
| 3,200.0 | 3,180.9 | 3,138.2 | 3,124.7 | 8.1 | 7.3 | -164.34 | 4.9 | 296.9 | 606.0 | 594.5 | 11.46 | 52.881 | |
| 3,300.0 | 3,280.2 | 3,236.1 | 3,222.1 | 8.4 | 7.6 | -164.31 | 4.4 | 306.6 | 626.4 | 614.6 | 11.82 | 52.991 | |
| 3,400.0 | 3,379.5 | 3,334.0 | 3,319.5 | 8.7 | 7.8 | -164.28 | 3.9 | 316.3 | 646.9 | 634.7 | 12.18 | 53.094 | |
| 3,500.0 | 3,478.8 | 3,431.9 | 3,416.9 | 8.9 | 8.1 | -164.25 | 3.5 | 326.0 | 667.3 | 654.8 | 12.55 | 53.191 | |
| 3,600.0 | 3,578.1 | 3,529.7 | 3,514.3 | 9.2 | 8.3 | -164.22 | 3.0 | 335.7 | 687.8 | 674.9 | 12.91 | 53.283 | |
| 3,700.0 | 3,677.5 | 3,627.6 | 3,611.7 | 9.5 | 8.6 | -164.19 | 2.5 | 345.4 | 708.2 | 695.0 | 13.27 | 53.370 | |
| 3,800.0 | 3,776.8 | 3,725.5 | 3,709.1 | 9.7 | 8.8 | -164.16 | 2.0 | 355.1 | 728.7 | 715.1 | 13.63 | 53.452 | |
| 3,900.0 | 3,876.1 | 3,823.4 | 3,806.5 | 10.0 | 9.0 | -164.14 | 1.6 | 364.8 | 749.1 | 735.2 | 13.99 | 53.530 | |
| 4,000.0 | 3,975.4 | 3,921.3 | 3,903.9 | 10.3 | 9.3 | -164.12 | 1.1 | 374.5 | 769.6 | 755.2 | 14.36 | 53.604 | |
| 4,100.0 | 4,074.7 | 4,019.2 | 4,001.3 | 10.5 | 9.5 | -164.10 | 0.6 | 384.2 | 790.1 | 775.3 | 14.72 | 53.675 | |
| 4,200.0 | 4,174.0 | 4,117.1 | 4,098.7 | 10.8 | 9.8 | -164.08 | 0.1 | 393.9 | 810.5 | 795.4 | 15.08 | 53.742 | |
| 4,300.0 | 4,273.3 | 4,214.9 | 4,196.1 | 11.1 | 10.0 | -164.06 | -0.3 | 403.6 | 831.0 | 815.5 | 15.44 | 53.805 | |
| 4,400.0 | 4,372.6 | 4,312.8 | 4,293.5 | 11.3 | 10.2 | -164.04 | -0.8 | 413.3 | 851.4 | 835.6 | 15.81 | 53.866 | |
| 4,500.0 | 4,471.9 | 4,410.7 | 4,390.9 | 11.6 | 10.5 | -164.02 | -1.3 | 423.0 | 871.9 | 855.7 | 16.17 | 53.924 | |
| 4,600.0 | 4,571.3 | 4,508.6 | 4,488.3 | 11.9 | 10.7 | -164.00 | -1.7 | 432.7 | 892.3 | 875.8 | 16.53 | 53.980 | |
| 4,700.0 | 4,670.6 | 4,606.5 | 4,585.7 | 12.2 | 11.0 | -163.99 | -2.2 | 442.4 | 912.8 | 895.9 | 16.89 | 54.033 | |
| 4,800.0 | 4,769.9 | 4,704.4 | 4,683.1 | 12.4 | 11.2 | -163.97 | -2.7 | 452.1 | 933.2 | 916.0 | 17.26 | 54.084 | |
| 4,900.0 | 4,869.2 | 4,802.3 | 4,780.5 | 12.7 | 11.4 | -163.96 | -3.2 | 461.8 | 953.7 | 936.1 | 17.62 | 54.133 | |
| 5,000.0 | 4,968.5 | 4,900.1 | 4,878.0 | 13.0 | 11.7 | -163.94 | -3.6 | 471.5 | 974.1 | 956.2 | 17.98 | 54.180 | |
| 5,100.0 | 5,067.8 | 4,998.0 | 4,975.4 | 13.2 | 11.9 | -163.93 | -4.1 | 481.2 | 994.6 | 976.3 | 18.34 | 54.225 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-13D - DD - Plan #3

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 5,167.1 | 5,095.9 | 5,072.8 | 13.5 | 12.2 | -163.92 | -4.6 | 490.9 | 1,015.1 | 996.3 | 18.70 | 54.268 | |
| 5,300.0 | 5,266.4 | 5,193.8 | 5,170.2 | 13.8 | 12.4 | -163.90 | -5.0 | 500.6 | 1,035.5 | 1,016.4 | 19.07 | 54.310 | |
| 5,400.0 | 5,365.7 | 5,291.7 | 5,267.6 | 14.0 | 12.7 | -163.89 | -5.5 | 510.3 | 1,056.0 | 1,036.5 | 19.43 | 54.350 | |
| 5,500.0 | 5,465.1 | 5,389.6 | 5,365.0 | 14.3 | 12.9 | -163.88 | -6.0 | 520.0 | 1,076.4 | 1,056.6 | 19.79 | 54.388 | |
| 5,600.0 | 5,564.4 | 5,487.5 | 5,462.4 | 14.6 | 13.1 | -163.87 | -6.5 | 529.7 | 1,096.9 | 1,076.7 | 20.15 | 54.425 | |
| 5,700.0 | 5,663.7 | 5,585.3 | 5,559.8 | 14.8 | 13.4 | -163.86 | -6.9 | 539.4 | 1,117.3 | 1,096.8 | 20.52 | 54.461 | |
| 5,800.0 | 5,763.0 | 5,683.2 | 5,657.2 | 15.1 | 13.6 | -163.85 | -7.4 | 549.1 | 1,137.8 | 1,116.9 | 20.88 | 54.496 | |

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-14D - DD - Plan #3 — **Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 45.42 | 28.0 | 28.5 | 40.0 | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 45.42 | 28.0 | 28.5 | 40.0 | 39.7 | 0.30 | 134.681 | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 45.42 | 28.0 | 28.5 | 40.0 | 39.3 | 0.65 | 61.881 | CC, ES |
| 300.0 | 300.0 | 300.3 | 300.3 | 0.5 | 0.5 | 167.10 | 28.9 | 26.9 | 41.2 | 40.2 | 1.00 | 41.275 | |
| 400.0 | 399.8 | 400.5 | 400.3 | 0.7 | 0.7 | 162.08 | 31.5 | 22.4 | 45.3 | 43.9 | 1.37 | 33.049 | |
| 500.0 | 499.5 | 500.2 | 499.7 | 0.9 | 0.9 | 155.53 | 35.9 | 14.8 | 52.6 | 50.8 | 1.78 | 29.571 | |
| 600.0 | 598.8 | 599.5 | 598.2 | 1.2 | 1.2 | 149.19 | 41.7 | 4.8 | 63.0 | 60.8 | 2.23 | 28.285 | |
| 700.0 | 698.1 | 698.7 | 696.7 | 1.4 | 1.4 | 144.54 | 47.6 | -5.6 | 74.2 | 71.5 | 2.69 | 27.527 | |
| 800.0 | 797.4 | 797.9 | 795.2 | 1.7 | 1.7 | 141.11 | 53.6 | -15.9 | 85.7 | 82.5 | 3.17 | 27.021 | |
| 900.0 | 896.7 | 897.1 | 893.7 | 1.9 | 2.0 | 138.51 | 59.5 | -26.3 | 97.5 | 93.8 | 3.66 | 26.669 | |
| 1,000.0 | 996.0 | 996.3 | 992.2 | 2.2 | 2.2 | 136.46 | 65.5 | -36.6 | 109.4 | 105.3 | 4.14 | 26.415 | |
| 1,100.0 | 1,095.3 | 1,095.6 | 1,090.7 | 2.5 | 2.5 | 134.83 | 71.5 | -47.0 | 121.5 | 116.8 | 4.63 | 26.226 | |
| 1,200.0 | 1,194.7 | 1,194.8 | 1,189.2 | 2.7 | 2.8 | 133.48 | 77.4 | -57.3 | 133.6 | 128.5 | 5.12 | 26.080 | |
| 1,300.0 | 1,294.0 | 1,294.0 | 1,287.7 | 3.0 | 3.0 | 132.36 | 83.4 | -67.7 | 145.8 | 140.1 | 5.61 | 25.967 | |
| 1,400.0 | 1,393.3 | 1,393.2 | 1,386.2 | 3.3 | 3.3 | 131.42 | 89.3 | -78.0 | 158.0 | 151.9 | 6.11 | 25.876 | |
| 1,500.0 | 1,492.6 | 1,492.4 | 1,484.7 | 3.5 | 3.6 | 130.61 | 95.3 | -88.4 | 170.2 | 163.6 | 6.60 | 25.803 | |
| 1,600.0 | 1,591.9 | 1,591.7 | 1,583.2 | 3.8 | 3.8 | 129.90 | 101.3 | -98.7 | 182.5 | 175.4 | 7.09 | 25.742 | |
| 1,700.0 | 1,691.2 | 1,690.9 | 1,681.7 | 4.1 | 4.1 | 129.29 | 107.2 | -109.1 | 194.8 | 187.3 | 7.58 | 25.692 | |
| 1,800.0 | 1,790.5 | 1,790.1 | 1,780.2 | 4.4 | 4.4 | 128.75 | 113.2 | -119.4 | 207.2 | 199.1 | 8.08 | 25.649 | |
| 1,900.0 | 1,889.8 | 1,889.3 | 1,878.7 | 4.6 | 4.6 | 128.27 | 119.1 | -129.8 | 219.5 | 211.0 | 8.57 | 25.613 | |
| 2,000.0 | 1,989.2 | 1,988.5 | 1,977.2 | 4.9 | 4.9 | 127.84 | 125.1 | -140.1 | 231.9 | 222.8 | 9.06 | 25.582 | |
| 2,100.0 | 2,088.5 | 2,087.8 | 2,075.7 | 5.2 | 5.2 | 127.46 | 131.1 | -150.5 | 244.3 | 234.7 | 9.56 | 25.554 | |
| 2,200.0 | 2,187.8 | 2,187.0 | 2,174.2 | 5.4 | 5.5 | 127.11 | 137.0 | -160.8 | 256.7 | 246.6 | 10.05 | 25.531 | |
| 2,300.0 | 2,287.1 | 2,286.2 | 2,272.7 | 5.7 | 5.7 | 126.80 | 143.0 | -171.2 | 269.0 | 258.5 | 10.55 | 25.510 | |
| 2,400.0 | 2,386.4 | 2,385.4 | 2,371.2 | 6.0 | 6.0 | 126.51 | 148.9 | -181.5 | 281.4 | 270.4 | 11.04 | 25.492 | |
| 2,500.0 | 2,485.7 | 2,484.6 | 2,469.7 | 6.2 | 6.3 | 126.24 | 154.9 | -191.9 | 293.9 | 282.3 | 11.53 | 25.476 | |
| 2,600.0 | 2,585.0 | 2,583.8 | 2,568.2 | 6.5 | 6.5 | 126.00 | 160.8 | -202.2 | 306.3 | 294.2 | 12.03 | 25.461 | |
| 2,700.0 | 2,684.3 | 2,683.1 | 2,666.7 | 6.8 | 6.8 | 125.78 | 166.8 | -212.6 | 318.7 | 306.2 | 12.52 | 25.448 | |
| 2,800.0 | 2,783.6 | 2,782.3 | 2,765.2 | 7.0 | 7.1 | 125.57 | 172.8 | -223.0 | 331.1 | 318.1 | 13.02 | 25.436 | |
| 2,900.0 | 2,883.0 | 2,881.5 | 2,863.7 | 7.3 | 7.4 | 125.38 | 178.7 | -233.3 | 343.5 | 330.0 | 13.51 | 25.425 | |
| 3,000.0 | 2,982.3 | 2,980.7 | 2,962.2 | 7.6 | 7.6 | 125.20 | 184.7 | -243.7 | 356.0 | 342.0 | 14.01 | 25.416 | |
| 3,100.0 | 3,081.6 | 3,079.9 | 3,060.7 | 7.8 | 7.9 | 125.04 | 190.6 | -254.0 | 368.4 | 353.9 | 14.50 | 25.407 | |
| 3,200.0 | 3,180.9 | 3,179.2 | 3,159.2 | 8.1 | 8.2 | 124.88 | 196.6 | -264.4 | 380.8 | 365.8 | 14.99 | 25.399 | |
| 3,300.0 | 3,280.2 | 3,278.4 | 3,257.7 | 8.4 | 8.4 | 124.73 | 202.6 | -274.7 | 393.3 | 377.8 | 15.49 | 25.391 | |
| 3,400.0 | 3,379.5 | 3,377.6 | 3,356.2 | 8.7 | 8.7 | 124.60 | 208.5 | -285.1 | 405.7 | 389.7 | 15.98 | 25.384 | |
| 3,500.0 | 3,478.8 | 3,476.8 | 3,454.7 | 8.9 | 9.0 | 124.47 | 214.5 | -295.4 | 418.2 | 401.7 | 16.48 | 25.378 | |
| 3,600.0 | 3,578.1 | 3,576.0 | 3,553.2 | 9.2 | 9.3 | 124.35 | 220.4 | -305.8 | 430.6 | 413.6 | 16.97 | 25.372 | |
| 3,700.0 | 3,677.5 | 3,675.3 | 3,651.7 | 9.5 | 9.5 | 124.23 | 226.4 | -316.1 | 443.0 | 425.6 | 17.47 | 25.367 | |
| 3,800.0 | 3,776.8 | 3,774.5 | 3,750.1 | 9.7 | 9.8 | 124.13 | 232.4 | -326.5 | 455.5 | 437.5 | 17.96 | 25.362 | |
| 3,900.0 | 3,876.1 | 3,873.7 | 3,848.6 | 10.0 | 10.1 | 124.02 | 238.3 | -336.8 | 467.9 | 449.5 | 18.45 | 25.357 | |
| 4,000.0 | 3,975.4 | 3,972.9 | 3,947.1 | 10.3 | 10.3 | 123.93 | 244.3 | -347.2 | 480.4 | 461.4 | 18.95 | 25.353 | |
| 4,100.0 | 4,074.7 | 4,072.1 | 4,045.6 | 10.5 | 10.6 | 123.83 | 250.2 | -357.5 | 492.8 | 473.4 | 19.44 | 25.349 | |
| 4,200.0 | 4,174.0 | 4,171.3 | 4,144.1 | 10.8 | 10.9 | 123.75 | 256.2 | -367.9 | 505.3 | 485.4 | 19.94 | 25.345 | |
| 4,300.0 | 4,273.3 | 4,270.6 | 4,242.6 | 11.1 | 11.2 | 123.66 | 262.1 | -378.2 | 517.7 | 497.3 | 20.43 | 25.341 | |
| 4,400.0 | 4,372.6 | 4,369.8 | 4,341.1 | 11.3 | 11.4 | 123.58 | 268.1 | -388.6 | 530.2 | 509.3 | 20.93 | 25.338 | |
| 4,500.0 | 4,471.9 | 4,469.0 | 4,439.6 | 11.6 | 11.7 | 123.51 | 274.1 | -398.9 | 542.7 | 521.2 | 21.42 | 25.335 | |
| 4,600.0 | 4,571.3 | 4,568.2 | 4,538.1 | 11.9 | 12.0 | 123.44 | 280.0 | -409.3 | 555.1 | 533.2 | 21.91 | 25.332 | |
| 4,700.0 | 4,670.6 | 4,667.4 | 4,636.6 | 12.2 | 12.2 | 123.37 | 286.0 | -419.6 | 567.6 | 545.2 | 22.41 | 25.329 | |
| 4,800.0 | 4,769.9 | 4,766.7 | 4,735.1 | 12.4 | 12.5 | 123.30 | 291.9 | -430.0 | 580.0 | 557.1 | 22.90 | 25.326 | |
| 4,900.0 | 4,869.2 | 4,865.9 | 4,833.6 | 12.7 | 12.8 | 123.24 | 297.9 | -440.4 | 592.5 | 569.1 | 23.40 | 25.324 | |
| 5,000.0 | 4,968.5 | 4,965.1 | 4,932.1 | 13.0 | 13.1 | 123.18 | 303.9 | -450.7 | 605.0 | 581.1 | 23.89 | 25.321 | |
| 5,100.0 | 5,067.8 | 5,064.3 | 5,030.6 | 13.2 | 13.3 | 123.12 | 309.8 | -461.1 | 617.4 | 593.0 | 24.39 | 25.319 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-14D - DD - Plan #3

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 5,167.1 | 5,163.5 | 5,129.1 | 13.5 | 13.6 | 123.06 | 315.8 | -471.4 | 629.9 | 605.0 | 24.88 | 25.317 | |
| 5,300.0 | 5,266.4 | 5,262.8 | 5,227.6 | 13.8 | 13.9 | 123.01 | 321.7 | -481.8 | 642.3 | 617.0 | 25.37 | 25.315 | |
| 5,400.0 | 5,365.7 | 5,362.0 | 5,326.1 | 14.0 | 14.2 | 122.96 | 327.7 | -492.1 | 654.8 | 628.9 | 25.87 | 25.313 | |
| 5,500.0 | 5,465.1 | 5,461.2 | 5,424.6 | 14.3 | 14.4 | 122.91 | 333.7 | -502.5 | 667.3 | 640.9 | 26.36 | 25.311 | |
| 5,600.0 | 5,564.4 | 5,560.4 | 5,523.1 | 14.6 | 14.7 | 122.86 | 339.6 | -512.8 | 679.7 | 652.9 | 26.86 | 25.309 | |
| 5,700.0 | 5,663.7 | 5,659.6 | 5,621.6 | 14.8 | 15.0 | 122.81 | 345.6 | -523.2 | 692.2 | 664.8 | 27.35 | 25.307 | |
| 5,800.0 | 5,763.0 | 5,758.8 | 5,720.1 | 15.1 | 15.2 | 122.77 | 351.5 | -533.5 | 704.7 | 676.8 | 27.85 | 25.306 | |
| 5,900.0 | 5,862.3 | 5,858.1 | 5,818.6 | 15.4 | 15.5 | 122.72 | 357.5 | -543.9 | 717.1 | 688.8 | 28.34 | 25.304 | |
| 6,000.0 | 5,961.6 | 5,957.3 | 5,917.1 | 15.7 | 15.8 | 122.68 | 363.4 | -554.2 | 729.6 | 700.8 | 28.83 | 25.303 | |
| 6,100.0 | 6,061.0 | 6,056.5 | 6,015.6 | 15.9 | 16.1 | 122.70 | 369.4 | -564.6 | 741.9 | 712.6 | 29.33 | 25.293 | |
| 6,200.0 | 6,160.6 | 6,155.9 | 6,114.2 | 16.1 | 16.3 | 122.65 | 375.4 | -574.9 | 752.8 | 723.0 | 29.80 | 25.260 | |
| 6,300.0 | 6,260.4 | 6,268.2 | 6,226.0 | 16.3 | 16.6 | 122.39 | 381.3 | -585.3 | 761.2 | 730.9 | 30.23 | 25.182 | |
| 6,400.0 | 6,360.4 | 6,384.1 | 6,341.5 | 16.4 | 16.8 | 122.10 | 385.2 | -592.1 | 765.6 | 735.1 | 30.56 | 25.049 | |
| 6,500.0 | 6,460.4 | 6,500.3 | 6,457.7 | 16.5 | 17.0 | 118.38 | 386.8 | -594.8 | 767.2 | 736.4 | 30.86 | 24.861 | |
| 6,600.0 | 6,560.4 | 6,605.7 | 6,563.1 | 16.7 | 17.1 | 118.44 | 386.7 | -595.2 | 767.7 | 736.5 | 31.15 | 24.648 | |
| 6,700.0 | 6,660.4 | 6,707.8 | 6,665.1 | 16.8 | 17.2 | 118.45 | 386.1 | -596.2 | 767.8 | 736.3 | 31.43 | 24.425 | |
| 6,800.0 | 6,760.4 | 6,807.8 | 6,765.1 | 17.0 | 17.3 | 118.45 | 385.5 | -597.3 | 767.8 | 736.1 | 31.72 | 24.204 | |
| 6,900.0 | 6,860.4 | 6,907.8 | 6,865.1 | 17.1 | 17.5 | 118.45 | 384.8 | -598.4 | 767.8 | 735.8 | 32.01 | 23.987 | |
| 7,000.0 | 6,960.4 | 7,007.8 | 6,965.1 | 17.2 | 17.6 | 118.45 | 384.2 | -599.6 | 767.8 | 735.5 | 32.30 | 23.772 | |
| 7,100.0 | 7,060.3 | 7,107.8 | 7,065.1 | 17.4 | 17.7 | 118.45 | 383.5 | -600.7 | 767.8 | 735.2 | 32.59 | 23.560 | |
| 7,200.0 | 7,160.3 | 7,207.8 | 7,165.1 | 17.5 | 17.9 | 118.45 | 382.9 | -601.8 | 767.8 | 734.9 | 32.88 | 23.351 | |
| 7,300.0 | 7,260.3 | 7,307.8 | 7,265.1 | 17.6 | 18.0 | 118.45 | 382.2 | -602.9 | 767.8 | 734.6 | 33.17 | 23.145 | |
| 7,400.0 | 7,360.3 | 7,407.8 | 7,365.1 | 17.8 | 18.1 | 118.45 | 381.6 | -604.1 | 767.8 | 734.3 | 33.47 | 22.942 | |
| 7,500.0 | 7,460.3 | 7,507.8 | 7,465.1 | 17.9 | 18.3 | 118.45 | 380.9 | -605.2 | 767.8 | 734.0 | 33.76 | 22.741 | |
| 7,600.0 | 7,560.3 | 7,607.8 | 7,565.1 | 18.1 | 18.4 | 118.45 | 380.3 | -606.3 | 767.8 | 733.7 | 34.06 | 22.544 | |
| 7,700.0 | 7,660.3 | 7,707.8 | 7,665.0 | 18.2 | 18.5 | 118.45 | 379.6 | -607.4 | 767.8 | 733.4 | 34.35 | 22.349 | |
| 7,800.0 | 7,760.3 | 7,807.8 | 7,765.0 | 18.4 | 18.7 | 118.45 | 379.0 | -608.6 | 767.8 | 733.1 | 34.65 | 22.156 | |
| 7,900.0 | 7,860.3 | 7,907.8 | 7,865.0 | 18.5 | 18.8 | 118.45 | 378.3 | -609.7 | 767.8 | 732.8 | 34.95 | 21.967 | |
| 8,000.0 | 7,960.3 | 8,007.8 | 7,965.0 | 18.7 | 18.9 | 118.45 | 377.7 | -610.8 | 767.8 | 732.5 | 35.25 | 21.780 | |
| 8,100.0 | 8,060.3 | 8,107.8 | 8,065.0 | 18.8 | 19.1 | 118.45 | 377.0 | -612.0 | 767.8 | 732.2 | 35.55 | 21.596 | |
| 8,200.0 | 8,160.3 | 8,207.8 | 8,165.0 | 18.9 | 19.2 | 118.45 | 376.4 | -613.1 | 767.8 | 731.9 | 35.85 | 21.414 | |
| 8,300.0 | 8,260.2 | 8,307.8 | 8,265.0 | 19.1 | 19.3 | 118.45 | 375.7 | -614.2 | 767.8 | 731.6 | 36.16 | 21.234 | |
| 8,400.0 | 8,360.2 | 8,407.8 | 8,365.0 | 19.2 | 19.5 | 118.45 | 375.1 | -615.3 | 767.8 | 731.3 | 36.46 | 21.058 | |
| 8,500.0 | 8,460.2 | 8,507.8 | 8,465.0 | 19.4 | 19.6 | 118.45 | 374.4 | -616.5 | 767.8 | 731.0 | 36.77 | 20.883 | |
| 8,600.0 | 8,560.2 | 8,607.8 | 8,565.0 | 19.5 | 19.8 | 118.45 | 373.8 | -617.6 | 767.8 | 730.7 | 37.07 | 20.711 | |
| 8,700.0 | 8,660.2 | 8,707.8 | 8,665.0 | 19.7 | 19.9 | 118.45 | 373.1 | -618.7 | 767.8 | 730.4 | 37.38 | 20.541 | |
| 8,800.0 | 8,760.2 | 8,807.8 | 8,765.0 | 19.8 | 20.0 | 118.45 | 372.5 | -619.9 | 767.8 | 730.1 | 37.68 | 20.374 | |
| 8,900.0 | 8,860.2 | 8,907.8 | 8,864.9 | 20.0 | 20.2 | 118.45 | 371.8 | -621.0 | 767.8 | 729.8 | 37.99 | 20.209 | |
| 9,000.0 | 8,960.2 | 9,007.8 | 8,964.9 | 20.1 | 20.3 | 118.45 | 371.2 | -622.1 | 767.8 | 729.5 | 38.30 | 20.046 | |
| 9,100.0 | 9,060.2 | 9,107.8 | 9,064.9 | 20.3 | 20.5 | 118.45 | 370.5 | -623.2 | 767.8 | 729.2 | 38.61 | 19.886 | |
| 9,200.0 | 9,160.2 | 9,207.8 | 9,164.9 | 20.4 | 20.6 | 118.44 | 369.8 | -624.4 | 767.8 | 728.9 | 38.92 | 19.728 | |
| 9,300.0 | 9,260.2 | 9,307.8 | 9,264.9 | 20.6 | 20.8 | 118.44 | 369.2 | -625.5 | 767.8 | 728.5 | 39.23 | 19.571 | |
| 9,400.0 | 9,360.2 | 9,407.8 | 9,364.9 | 20.7 | 20.9 | 118.44 | 368.5 | -626.6 | 767.8 | 728.2 | 39.54 | 19.417 | |
| 9,500.0 | 9,460.1 | 9,507.8 | 9,464.9 | 20.9 | 21.0 | 118.44 | 367.9 | -627.8 | 767.8 | 727.9 | 39.85 | 19.265 | |
| 9,551.9 | 9,512.0 | 9,559.6 | 9,516.8 | 21.0 | 21.1 | 118.44 | 367.6 | -628.3 | 767.8 | 727.8 | 40.01 | 19.187 | SF |

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-15D - DD - DD

**Offset Site Error:** 0.0 ft

**Survey Program:** 200-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 | 10.0 | 10.0 | 0.0 | 0.0 | 45.64 | 35.0 | 35.8 | 50.0 | | | | |
| 100.0 | 100.0 | 110.4 | 110.4 | 0.1 | 0.2 | 44.40 | 35.5 | 34.7 | 49.6 | 49.3 | 0.32 | 154.123 | |
| 200.0 | 200.0 | 210.6 | 210.5 | 0.3 | 0.3 | 40.99 | 36.7 | 31.9 | 48.6 | 48.0 | 0.66 | 74.086 | |
| 224.1 | 224.1 | 234.6 | 234.5 | 0.4 | 0.4 | 163.35 | 37.2 | 30.9 | 48.5 | 47.7 | 0.76 | 64.105 | CC, ES |
| 300.0 | 300.0 | 310.0 | 309.8 | 0.5 | 0.6 | 158.66 | 39.8 | 27.2 | 49.8 | 48.8 | 1.05 | 47.480 | |
| 400.0 | 399.8 | 409.2 | 408.6 | 0.7 | 0.8 | 151.71 | 45.4 | 20.6 | 55.9 | 54.4 | 1.46 | 38.212 | |
| 500.0 | 499.5 | 507.9 | 506.6 | 0.9 | 1.1 | 145.56 | 52.8 | 12.1 | 66.5 | 64.6 | 1.90 | 34.950 | |
| 600.0 | 598.8 | 605.5 | 603.5 | 1.2 | 1.3 | 141.87 | 61.6 | 3.4 | 81.1 | 78.7 | 2.36 | 34.394 | |
| 700.0 | 698.1 | 702.5 | 699.5 | 1.4 | 1.6 | 139.08 | 72.2 | -5.4 | 97.9 | 95.0 | 2.83 | 34.638 | |
| 800.0 | 797.4 | 799.2 | 794.9 | 1.7 | 1.9 | 136.65 | 84.2 | -14.6 | 116.2 | 112.9 | 3.31 | 35.148 | |
| 900.0 | 896.7 | 896.0 | 890.2 | 1.9 | 2.3 | 134.20 | 98.0 | -25.2 | 136.2 | 132.4 | 3.81 | 35.755 | |
| 1,000.0 | 996.0 | 996.6 | 989.0 | 2.2 | 2.6 | 131.78 | 112.3 | -37.5 | 156.1 | 151.8 | 4.31 | 36.178 | |
| 1,100.0 | 1,095.3 | 1,095.7 | 1,086.8 | 2.5 | 3.0 | 130.46 | 124.2 | -48.4 | 174.2 | 169.4 | 4.80 | 36.292 | |
| 1,200.0 | 1,194.7 | 1,192.3 | 1,182.1 | 2.7 | 3.3 | 129.67 | 136.2 | -58.2 | 192.8 | 187.6 | 5.28 | 36.509 | |
| 1,300.0 | 1,294.0 | 1,289.1 | 1,277.5 | 3.0 | 3.6 | 128.94 | 149.1 | -68.1 | 212.4 | 206.6 | 5.76 | 36.857 | |
| 1,400.0 | 1,393.3 | 1,386.1 | 1,373.2 | 3.3 | 3.9 | 128.32 | 162.5 | -78.1 | 232.4 | 226.1 | 6.25 | 37.174 | |
| 1,500.0 | 1,492.6 | 1,487.8 | 1,473.3 | 3.5 | 4.3 | 127.71 | 176.1 | -88.9 | 252.1 | 245.3 | 6.74 | 37.390 | |
| 1,600.0 | 1,591.9 | 1,592.4 | 1,576.7 | 3.8 | 4.6 | 127.33 | 187.9 | -99.4 | 269.7 | 262.5 | 7.24 | 37.238 | |
| 1,700.0 | 1,691.2 | 1,694.9 | 1,678.2 | 4.1 | 4.9 | 127.01 | 197.5 | -109.8 | 285.5 | 277.7 | 7.73 | 36.907 | |
| 1,800.0 | 1,790.5 | 1,790.6 | 1,773.0 | 4.4 | 5.2 | 126.82 | 206.4 | -119.2 | 301.1 | 292.9 | 8.21 | 36.688 | |
| 1,900.0 | 1,889.8 | 1,888.2 | 1,869.8 | 4.6 | 5.5 | 126.73 | 216.1 | -128.2 | 317.5 | 308.8 | 8.68 | 36.582 | |
| 2,000.0 | 1,989.2 | 1,988.4 | 1,969.0 | 4.9 | 5.8 | 126.68 | 226.0 | -137.3 | 333.8 | 324.6 | 9.16 | 36.439 | |
| 2,100.0 | 2,088.5 | 2,089.0 | 2,068.8 | 5.2 | 6.1 | 126.60 | 235.2 | -146.7 | 349.4 | 339.7 | 9.64 | 36.227 | |
| 2,200.0 | 2,187.8 | 2,185.0 | 2,163.8 | 5.4 | 6.3 | 126.43 | 244.4 | -156.2 | 365.3 | 355.2 | 10.13 | 36.079 | |
| 2,300.0 | 2,287.1 | 2,281.3 | 2,259.2 | 5.7 | 6.6 | 126.22 | 254.0 | -166.1 | 381.7 | 371.1 | 10.61 | 35.976 | |
| 2,400.0 | 2,386.4 | 2,379.1 | 2,355.8 | 6.0 | 6.9 | 126.00 | 264.6 | -176.3 | 398.9 | 387.8 | 11.09 | 35.969 | |
| 2,500.0 | 2,485.7 | 2,471.0 | 2,446.7 | 6.2 | 7.3 | 125.85 | 275.0 | -185.6 | 416.6 | 405.0 | 11.56 | 36.027 | |
| 2,600.0 | 2,585.0 | 2,570.4 | 2,544.8 | 6.5 | 7.6 | 125.61 | 287.3 | -196.3 | 435.3 | 423.3 | 12.06 | 36.092 | |
| 2,700.0 | 2,684.3 | 2,669.5 | 2,642.5 | 6.8 | 7.9 | 125.35 | 299.1 | -207.2 | 453.6 | 441.0 | 12.56 | 36.127 | |
| 2,800.0 | 2,783.6 | 2,760.7 | 2,732.5 | 7.0 | 8.2 | 125.10 | 310.5 | -217.4 | 472.5 | 459.4 | 13.04 | 36.228 | |
| 2,900.0 | 2,883.0 | 2,870.0 | 2,840.2 | 7.3 | 8.6 | 124.83 | 323.9 | -229.7 | 491.1 | 477.5 | 13.55 | 36.232 | |
| 3,000.0 | 2,982.3 | 2,965.0 | 2,934.2 | 7.6 | 8.9 | 124.78 | 334.6 | -238.9 | 508.7 | 494.7 | 14.02 | 36.279 | |
| 3,100.0 | 3,081.6 | 3,049.8 | 3,017.8 | 7.8 | 9.2 | 124.69 | 345.7 | -247.5 | 528.2 | 513.7 | 14.49 | 36.462 | |
| 3,200.0 | 3,180.9 | 3,152.6 | 3,118.9 | 8.1 | 9.6 | 124.46 | 360.2 | -259.2 | 548.6 | 533.6 | 15.00 | 36.580 | |
| 3,300.0 | 3,280.2 | 3,261.9 | 3,226.8 | 8.4 | 9.9 | 124.31 | 373.5 | -270.8 | 567.1 | 551.6 | 15.51 | 36.576 | |
| 3,400.0 | 3,379.5 | 3,358.9 | 3,322.6 | 8.7 | 10.2 | 124.22 | 384.9 | -280.9 | 585.3 | 569.3 | 15.99 | 36.602 | |
| 3,500.0 | 3,478.8 | 3,464.6 | 3,427.1 | 8.9 | 10.5 | 124.17 | 395.9 | -291.4 | 602.1 | 585.6 | 16.49 | 36.509 | |
| 3,600.0 | 3,578.1 | 3,549.5 | 3,511.0 | 9.2 | 10.8 | 124.11 | 405.8 | -300.2 | 620.2 | 603.2 | 16.95 | 36.591 | |
| 3,700.0 | 3,677.5 | 3,642.6 | 3,602.8 | 9.5 | 11.2 | 124.04 | 418.2 | -309.7 | 639.8 | 622.4 | 17.42 | 36.729 | |
| 3,800.0 | 3,776.8 | 3,749.0 | 3,707.9 | 9.7 | 11.5 | 123.99 | 431.3 | -320.4 | 658.5 | 640.6 | 17.92 | 36.738 | |
| 3,900.0 | 3,876.1 | 3,838.8 | 3,796.4 | 10.0 | 11.8 | 123.94 | 442.9 | -329.5 | 677.8 | 659.4 | 18.40 | 36.847 | |
| 4,000.0 | 3,975.4 | 3,934.9 | 3,890.9 | 10.3 | 12.2 | 123.77 | 456.0 | -340.5 | 697.8 | 678.9 | 18.89 | 36.941 | |
| 4,100.0 | 4,074.7 | 4,038.0 | 3,992.4 | 10.5 | 12.5 | 123.64 | 469.9 | -352.1 | 717.7 | 698.3 | 19.40 | 36.991 | |
| 4,200.0 | 4,174.0 | 4,149.3 | 4,102.0 | 10.8 | 12.9 | 123.36 | 483.3 | -366.3 | 736.1 | 716.2 | 19.95 | 36.905 | |
| 4,300.0 | 4,273.3 | 4,253.1 | 4,204.4 | 11.1 | 13.2 | 123.15 | 494.4 | -379.1 | 753.2 | 732.8 | 20.46 | 36.816 | |
| 4,400.0 | 4,372.6 | 4,372.0 | 4,322.1 | 11.3 | 13.6 | 123.04 | 505.4 | -392.2 | 768.9 | 747.9 | 21.00 | 36.616 | |
| 4,500.0 | 4,471.9 | 4,444.0 | 4,393.4 | 11.6 | 13.8 | 123.02 | 512.1 | -399.5 | 784.7 | 763.3 | 21.42 | 36.641 | |
| 4,600.0 | 4,571.3 | 4,535.6 | 4,483.9 | 11.9 | 14.1 | 123.03 | 523.3 | -408.4 | 803.3 | 781.4 | 21.88 | 36.711 | |
| 4,700.0 | 4,670.6 | 4,644.3 | 4,591.3 | 12.2 | 14.4 | 123.08 | 535.8 | -418.4 | 821.3 | 798.9 | 22.38 | 36.700 | |
| 4,800.0 | 4,769.9 | 4,751.0 | 4,697.1 | 12.4 | 14.8 | 123.12 | 546.7 | -428.2 | 837.9 | 815.0 | 22.88 | 36.614 | |
| 4,900.0 | 4,869.2 | 4,847.0 | 4,792.0 | 12.7 | 15.1 | 123.05 | 556.2 | -438.8 | 854.2 | 830.8 | 23.38 | 36.531 | |
| 5,000.0 | 4,968.5 | 4,943.0 | 4,886.9 | 13.0 | 15.4 | 122.96 | 566.1 | -449.5 | 870.9 | 847.1 | 23.86 | 36.495 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-15D - DD - DD

**Offset Site Error:** 0.0 ft

**Survey Program:** 200-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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,100.0 | 5,067.8 | 5,038.0 | 4,980.9 | 13.2 | 15.7 | 122.97 | 576.2 | -458.7 | 888.0 | 863.6 | 24.33 | 36.499 | |
| 5,200.0 | 5,167.1 | 5,120.0 | 5,062.0 | 13.5 | 15.9 | 123.00 | 585.9 | -466.4 | 906.2 | 881.4 | 24.78 | 36.575 | |
| 5,300.0 | 5,266.4 | 5,215.0 | 5,155.7 | 13.8 | 16.2 | 122.99 | 598.2 | -475.8 | 925.6 | 900.3 | 25.25 | 36.659 | |
| 5,400.0 | 5,365.7 | 5,337.2 | 5,276.6 | 14.0 | 16.6 | 123.05 | 612.4 | -486.9 | 943.5 | 917.8 | 25.78 | 36.605 | |
| 5,500.0 | 5,465.1 | 5,419.0 | 5,357.5 | 14.3 | 16.9 | 123.10 | 622.2 | -494.0 | 961.8 | 935.6 | 26.21 | 36.693 | |
| 5,600.0 | 5,564.4 | 5,491.3 | 5,428.7 | 14.6 | 17.1 | 123.13 | 632.4 | -500.7 | 982.1 | 955.5 | 26.63 | 36.876 | |
| 5,700.0 | 5,663.7 | 5,601.3 | 5,536.9 | 14.8 | 17.5 | 123.07 | 648.4 | -512.4 | 1,003.2 | 976.0 | 27.17 | 36.926 | |
| 5,800.0 | 5,763.0 | 5,710.4 | 5,644.3 | 15.1 | 17.9 | 122.91 | 662.6 | -526.0 | 1,022.6 | 994.9 | 27.70 | 36.914 | |
| 5,900.0 | 5,862.3 | 5,806.2 | 5,738.5 | 15.4 | 18.3 | 122.78 | 674.8 | -537.6 | 1,041.7 | 1,013.5 | 28.19 | 36.947 | |
| 6,000.0 | 5,961.6 | 5,925.5 | 5,856.2 | 15.7 | 18.6 | 122.69 | 689.5 | -551.0 | 1,060.6 | 1,031.9 | 28.73 | 36.910 | |
| 6,100.0 | 6,061.0 | 6,061.5 | 5,991.1 | 15.9 | 19.0 | 122.79 | 700.6 | -564.0 | 1,074.7 | 1,045.4 | 29.30 | 36.682 | |
| 6,200.0 | 6,160.6 | 6,161.0 | 6,090.1 | 16.1 | 19.2 | 123.05 | 708.0 | -570.3 | 1,086.9 | 1,057.2 | 29.74 | 36.543 | |
| 6,300.0 | 6,260.4 | 6,281.7 | 6,210.2 | 16.3 | 19.5 | 123.08 | 715.9 | -578.3 | 1,096.5 | 1,066.3 | 30.18 | 36.327 | |
| 6,400.0 | 6,360.4 | 6,407.6 | 6,335.7 | 16.4 | 19.8 | 122.74 | 720.8 | -588.4 | 1,101.4 | 1,070.8 | 30.59 | 36.004 | |
| 6,500.0 | 6,460.4 | 6,508.7 | 6,436.3 | 16.5 | 20.0 | 118.73 | 723.8 | -597.6 | 1,104.7 | 1,073.7 | 30.92 | 35.727 | |
| 6,600.0 | 6,560.4 | 6,684.9 | 6,612.2 | 16.7 | 20.2 | 118.35 | 723.6 | -606.6 | 1,105.6 | 1,074.2 | 31.34 | 35.276 | |
| 6,700.0 | 6,660.4 | 6,780.5 | 6,707.6 | 16.8 | 20.3 | 118.25 | 720.0 | -609.6 | 1,102.5 | 1,070.9 | 31.63 | 34.852 | |
| 6,800.0 | 6,760.4 | 6,873.6 | 6,800.7 | 17.0 | 20.4 | 118.19 | 717.2 | -611.8 | 1,100.2 | 1,068.3 | 31.92 | 34.470 | |
| 6,900.0 | 6,860.4 | 6,969.0 | 6,896.0 | 17.1 | 20.5 | 118.12 | 714.4 | -614.1 | 1,097.9 | 1,065.7 | 32.21 | 34.086 | |
| 6,973.8 | 6,934.1 | 7,023.9 | 6,950.8 | 17.2 | 20.5 | 118.08 | 713.5 | -615.5 | 1,097.3 | 1,064.9 | 32.40 | 33.865 | |
| 7,000.0 | 6,960.4 | 7,044.9 | 6,971.9 | 17.2 | 20.6 | 118.06 | 713.4 | -616.0 | 1,097.4 | 1,064.9 | 32.47 | 33.793 | |
| 7,100.0 | 7,060.3 | 7,146.5 | 7,073.4 | 17.4 | 20.7 | 117.95 | 713.1 | -619.3 | 1,097.8 | 1,065.0 | 32.79 | 33.481 | |
| 7,188.9 | 7,149.3 | 7,239.3 | 7,166.2 | 17.5 | 20.8 | 117.82 | 712.4 | -622.8 | 1,097.8 | 1,064.7 | 33.07 | 33.197 | |
| 7,200.0 | 7,160.3 | 7,248.0 | 7,174.9 | 17.5 | 20.8 | 117.81 | 712.4 | -623.1 | 1,097.8 | 1,064.7 | 33.10 | 33.169 | |
| 7,300.0 | 7,260.3 | 7,327.5 | 7,254.3 | 17.6 | 20.9 | 117.76 | 712.7 | -625.1 | 1,099.0 | 1,065.6 | 33.36 | 32.942 | |
| 7,400.0 | 7,360.3 | 7,438.3 | 7,365.1 | 17.8 | 21.1 | 117.74 | 713.6 | -626.8 | 1,100.4 | 1,066.7 | 33.67 | 32.679 | |
| 7,500.0 | 7,460.3 | 7,532.4 | 7,459.2 | 17.9 | 21.2 | 117.71 | 714.3 | -628.4 | 1,101.8 | 1,067.9 | 33.96 | 32.442 | |
| 7,600.0 | 7,560.3 | 7,638.9 | 7,565.6 | 18.1 | 21.4 | 117.68 | 714.8 | -630.3 | 1,103.0 | 1,068.7 | 34.27 | 32.182 | |
| 7,700.0 | 7,660.3 | 7,735.2 | 7,661.9 | 18.2 | 21.5 | 117.62 | 715.4 | -632.6 | 1,104.2 | 1,069.6 | 34.57 | 31.939 | |
| 7,800.0 | 7,760.3 | 7,842.9 | 7,769.6 | 18.4 | 21.6 | 117.57 | 716.0 | -634.8 | 1,105.5 | 1,070.6 | 34.89 | 31.687 | |
| 7,900.0 | 7,860.3 | 7,953.3 | 7,880.0 | 18.5 | 21.8 | 117.50 | 715.1 | -637.4 | 1,105.4 | 1,070.2 | 35.22 | 31.390 | |
| 8,000.0 | 7,960.3 | 8,051.8 | 7,978.4 | 18.7 | 21.9 | 117.41 | 714.2 | -640.2 | 1,105.2 | 1,069.7 | 35.53 | 31.109 | |
| 8,100.0 | 8,060.3 | 8,155.4 | 8,082.0 | 18.8 | 22.0 | 117.31 | 713.2 | -643.3 | 1,105.0 | 1,069.1 | 35.84 | 30.828 | |
| 8,200.0 | 8,160.3 | 8,253.6 | 8,180.2 | 18.9 | 22.1 | 117.25 | 712.0 | -645.6 | 1,104.5 | 1,068.4 | 36.15 | 30.557 | |
| 8,288.2 | 8,248.4 | 8,338.5 | 8,265.0 | 19.1 | 22.3 | 117.20 | 711.3 | -647.3 | 1,104.4 | 1,068.0 | 36.42 | 30.324 | |
| 8,300.0 | 8,260.2 | 8,349.8 | 8,276.4 | 19.1 | 22.3 | 117.19 | 711.2 | -647.7 | 1,104.4 | 1,067.9 | 36.46 | 30.293 | |
| 8,400.0 | 8,360.2 | 8,453.1 | 8,379.6 | 19.2 | 22.4 | 117.08 | 710.4 | -650.9 | 1,104.3 | 1,067.6 | 36.78 | 30.027 | |
| 8,500.0 | 8,460.2 | 8,551.1 | 8,477.5 | 19.4 | 22.5 | 117.00 | 709.5 | -653.6 | 1,104.1 | 1,067.0 | 37.08 | 29.774 | |
| 8,515.4 | 8,475.6 | 8,565.7 | 8,492.1 | 19.4 | 22.6 | 117.00 | 709.4 | -653.9 | 1,104.1 | 1,067.0 | 37.13 | 29.737 | |
| 8,600.0 | 8,560.2 | 8,642.7 | 8,569.1 | 19.5 | 22.7 | 116.96 | 709.1 | -655.4 | 1,104.4 | 1,067.0 | 37.38 | 29.545 | |
| 8,700.0 | 8,660.2 | 8,751.0 | 8,677.4 | 19.7 | 22.8 | 116.91 | 708.7 | -657.7 | 1,104.7 | 1,067.0 | 37.71 | 29.299 | |
| 8,709.0 | 8,669.3 | 8,761.1 | 8,687.5 | 19.7 | 22.8 | 116.90 | 708.6 | -657.9 | 1,104.7 | 1,067.0 | 37.74 | 29.275 | |
| 8,800.0 | 8,760.2 | 8,846.0 | 8,772.4 | 19.8 | 22.9 | 116.85 | 708.4 | -659.9 | 1,105.1 | 1,067.1 | 38.01 | 29.071 | |
| 8,900.0 | 8,860.2 | 8,943.0 | 8,869.4 | 20.0 | 23.1 | 116.77 | 708.5 | -662.6 | 1,105.9 | 1,067.6 | 38.33 | 28.853 | |
| 9,000.0 | 8,960.2 | 9,040.3 | 8,966.6 | 20.1 | 23.2 | 116.70 | 708.5 | -665.2 | 1,106.7 | 1,068.1 | 38.64 | 28.644 | |
| 9,100.0 | 9,060.2 | 9,158.7 | 9,084.9 | 20.3 | 23.4 | 116.65 | 707.6 | -667.4 | 1,106.6 | 1,067.6 | 38.98 | 28.390 | |
| 9,200.0 | 9,160.2 | 9,255.0 | 9,181.2 | 20.4 | 23.5 | 116.62 | 706.2 | -669.1 | 1,105.8 | 1,066.6 | 39.28 | 28.149 | |
| 9,204.6 | 9,164.8 | 9,255.0 | 9,181.2 | 20.4 | 23.5 | 116.62 | 706.2 | -669.1 | 1,105.8 | 1,066.5 | 39.29 | 28.144 | |
| 9,300.0 | 9,260.2 | 9,255.0 | 9,181.2 | 20.6 | 23.5 | 116.62 | 706.2 | -669.1 | 1,109.9 | 1,070.5 | 39.44 | 28.142 | SF |
| 9,400.0 | 9,360.2 | 9,255.0 | 9,181.2 | 20.7 | 23.5 | 116.62 | 706.2 | -669.1 | 1,123.0 | 1,083.4 | 39.60 | 28.360 | |
| 9,500.0 | 9,460.1 | 9,255.0 | 9,181.2 | 20.9 | 23.5 | 116.62 | 706.2 | -669.1 | 1,144.6 | 1,104.9 | 39.75 | 28.793 | |

# Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-16D - DD - Plan #3

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 45.64 | 41.9 | 42.8 | 59.9 | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 45.64 | 41.9 | 42.8 | 59.9 | 59.6 | 0.30 | 201.931 | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 45.64 | 41.9 | 42.8 | 59.9 | 59.3 | 0.65 | 92.779 | CC, ES |
| 300.0 | 300.0 | 299.6 | 299.6 | 0.5 | 0.5 | 167.93 | 43.3 | 41.9 | 61.9 | 60.9 | 1.00 | 62.098 | |
| 400.0 | 399.8 | 398.8 | 398.7 | 0.7 | 0.7 | 164.54 | 47.6 | 38.9 | 68.2 | 66.8 | 1.36 | 49.969 | |
| 500.0 | 499.5 | 497.3 | 496.8 | 0.9 | 0.9 | 160.11 | 54.6 | 34.1 | 79.0 | 77.2 | 1.76 | 44.895 | |
| 600.0 | 598.8 | 594.9 | 593.7 | 1.2 | 1.2 | 155.54 | 64.3 | 27.4 | 93.9 | 91.8 | 2.19 | 42.872 | |
| 700.0 | 698.1 | 691.6 | 689.1 | 1.4 | 1.5 | 150.80 | 76.6 | 19.0 | 111.1 | 108.4 | 2.66 | 41.735 | |
| 800.0 | 797.4 | 787.1 | 783.0 | 1.7 | 1.8 | 146.14 | 91.3 | 8.9 | 130.5 | 127.4 | 3.16 | 41.268 | SF |
| 900.0 | 896.7 | 883.2 | 876.9 | 1.9 | 2.2 | 141.85 | 108.2 | -2.7 | 152.2 | 148.5 | 3.67 | 41.428 | |
| 1,000.0 | 996.0 | 980.2 | 971.6 | 2.2 | 2.6 | 138.54 | 125.5 | -14.6 | 174.7 | 170.5 | 4.19 | 41.726 | |
| 1,100.0 | 1,095.3 | 1,077.2 | 1,066.3 | 2.5 | 3.0 | 135.98 | 142.7 | -26.5 | 197.5 | 192.8 | 4.69 | 42.079 | |
| 1,200.0 | 1,194.7 | 1,174.2 | 1,161.0 | 2.7 | 3.4 | 133.95 | 160.0 | -38.4 | 220.7 | 215.5 | 5.20 | 42.442 | |
| 1,300.0 | 1,294.0 | 1,271.2 | 1,255.8 | 3.0 | 3.8 | 132.31 | 177.3 | -50.2 | 244.1 | 238.4 | 5.70 | 42.793 | |
| 1,400.0 | 1,393.3 | 1,368.2 | 1,350.5 | 3.3 | 4.2 | 130.96 | 194.5 | -62.1 | 267.7 | 261.5 | 6.21 | 43.125 | |
| 1,500.0 | 1,492.6 | 1,465.3 | 1,445.2 | 3.5 | 4.6 | 129.82 | 211.8 | -74.0 | 291.3 | 284.6 | 6.71 | 43.435 | |
| 1,600.0 | 1,591.9 | 1,562.3 | 1,539.9 | 3.8 | 5.0 | 128.86 | 229.1 | -85.8 | 315.1 | 307.9 | 7.21 | 43.720 | |
| 1,700.0 | 1,691.2 | 1,659.3 | 1,634.6 | 4.1 | 5.4 | 128.03 | 246.3 | -97.7 | 338.9 | 331.2 | 7.71 | 43.984 | |
| 1,800.0 | 1,790.5 | 1,756.3 | 1,729.3 | 4.4 | 5.8 | 127.30 | 263.6 | -109.6 | 362.8 | 354.6 | 8.20 | 44.227 | |
| 1,900.0 | 1,889.8 | 1,853.3 | 1,824.1 | 4.6 | 6.2 | 126.67 | 280.9 | -121.4 | 386.8 | 378.1 | 8.70 | 44.450 | |
| 2,000.0 | 1,989.2 | 1,950.3 | 1,918.8 | 4.9 | 6.6 | 126.11 | 298.1 | -133.3 | 410.8 | 401.6 | 9.20 | 44.657 | |
| 2,100.0 | 2,088.5 | 2,047.3 | 2,013.5 | 5.2 | 7.0 | 125.62 | 315.4 | -145.2 | 434.8 | 425.1 | 9.69 | 44.847 | |
| 2,200.0 | 2,187.8 | 2,144.3 | 2,108.2 | 5.4 | 7.4 | 125.17 | 332.7 | -157.0 | 458.8 | 448.6 | 10.19 | 45.024 | |
| 2,300.0 | 2,287.1 | 2,241.3 | 2,202.9 | 5.7 | 7.8 | 124.77 | 349.9 | -168.9 | 482.9 | 472.2 | 10.69 | 45.188 | |
| 2,400.0 | 2,386.4 | 2,338.3 | 2,297.7 | 6.0 | 8.2 | 124.41 | 367.2 | -180.8 | 507.0 | 495.8 | 11.18 | 45.340 | |
| 2,500.0 | 2,485.7 | 2,435.3 | 2,392.4 | 6.2 | 8.6 | 124.08 | 384.5 | -192.6 | 531.1 | 519.4 | 11.68 | 45.482 | |
| 2,600.0 | 2,585.0 | 2,532.3 | 2,487.1 | 6.5 | 9.0 | 123.78 | 401.7 | -204.5 | 555.2 | 543.0 | 12.17 | 45.614 | |
| 2,700.0 | 2,684.3 | 2,629.4 | 2,581.8 | 6.8 | 9.4 | 123.50 | 419.0 | -216.4 | 579.3 | 566.6 | 12.67 | 45.738 | |
| 2,800.0 | 2,783.6 | 2,726.4 | 2,676.5 | 7.0 | 9.8 | 123.25 | 436.3 | -228.3 | 603.4 | 590.3 | 13.16 | 45.854 | |
| 2,900.0 | 2,883.0 | 2,823.4 | 2,771.3 | 7.3 | 10.2 | 123.01 | 453.6 | -240.1 | 627.6 | 613.9 | 13.65 | 45.962 | |
| 3,000.0 | 2,982.3 | 2,920.4 | 2,866.0 | 7.6 | 10.6 | 122.80 | 470.8 | -252.0 | 651.8 | 637.6 | 14.15 | 46.064 | |
| 3,100.0 | 3,081.6 | 3,017.4 | 2,960.7 | 7.8 | 11.0 | 122.60 | 488.1 | -263.9 | 675.9 | 661.3 | 14.64 | 46.161 | |
| 3,200.0 | 3,180.9 | 3,114.4 | 3,055.4 | 8.1 | 11.4 | 122.41 | 505.4 | -275.7 | 700.1 | 685.0 | 15.14 | 46.251 | |
| 3,300.0 | 3,280.2 | 3,211.4 | 3,150.1 | 8.4 | 11.8 | 122.23 | 522.6 | -287.6 | 724.3 | 708.7 | 15.63 | 46.337 | |
| 3,400.0 | 3,379.5 | 3,308.4 | 3,244.9 | 8.7 | 12.2 | 122.07 | 539.9 | -299.5 | 748.5 | 732.4 | 16.12 | 46.418 | |
| 3,500.0 | 3,478.8 | 3,405.4 | 3,339.6 | 8.9 | 12.6 | 121.92 | 557.2 | -311.3 | 772.7 | 756.1 | 16.62 | 46.495 | |
| 3,600.0 | 3,578.1 | 3,502.4 | 3,434.3 | 9.2 | 13.0 | 121.77 | 574.4 | -323.2 | 796.9 | 779.8 | 17.11 | 46.568 | |
| 3,700.0 | 3,677.5 | 3,599.4 | 3,529.0 | 9.5 | 13.5 | 121.64 | 591.7 | -335.1 | 821.1 | 803.5 | 17.61 | 46.637 | |
| 3,800.0 | 3,776.8 | 3,696.5 | 3,623.7 | 9.7 | 13.9 | 121.51 | 609.0 | -346.9 | 845.3 | 827.2 | 18.10 | 46.703 | |
| 3,900.0 | 3,876.1 | 3,793.5 | 3,718.4 | 10.0 | 14.3 | 121.39 | 626.2 | -358.8 | 869.5 | 850.9 | 18.59 | 46.766 | |
| 4,000.0 | 3,975.4 | 3,890.5 | 3,813.2 | 10.3 | 14.7 | 121.27 | 643.5 | -370.7 | 893.7 | 874.6 | 19.09 | 46.826 | |
| 4,100.0 | 4,074.7 | 3,987.5 | 3,907.9 | 10.5 | 15.1 | 121.16 | 660.8 | -382.5 | 917.9 | 898.4 | 19.58 | 46.883 | |
| 4,200.0 | 4,174.0 | 4,084.5 | 4,002.6 | 10.8 | 15.5 | 121.06 | 678.0 | -394.4 | 942.2 | 922.1 | 20.07 | 46.937 | |
| 4,300.0 | 4,273.3 | 4,181.5 | 4,097.3 | 11.1 | 15.9 | 120.96 | 695.3 | -406.3 | 966.4 | 945.8 | 20.57 | 46.989 | |
| 4,400.0 | 4,372.6 | 4,278.5 | 4,192.0 | 11.3 | 16.3 | 120.87 | 712.6 | -418.1 | 990.6 | 969.6 | 21.06 | 47.039 | |
| 4,500.0 | 4,471.9 | 4,375.5 | 4,286.8 | 11.6 | 16.7 | 120.78 | 729.8 | -430.0 | 1,014.8 | 993.3 | 21.55 | 47.087 | |
| 4,600.0 | 4,571.3 | 4,472.5 | 4,381.5 | 11.9 | 17.1 | 120.70 | 747.1 | -441.9 | 1,039.1 | 1,017.0 | 22.05 | 47.132 | |
| 4,700.0 | 4,670.6 | 4,569.5 | 4,476.2 | 12.2 | 17.5 | 120.62 | 764.4 | -453.8 | 1,063.3 | 1,040.8 | 22.54 | 47.176 | |
| 4,800.0 | 4,769.9 | 4,666.5 | 4,570.9 | 12.4 | 17.9 | 120.54 | 781.6 | -465.6 | 1,087.5 | 1,064.5 | 23.03 | 47.219 | |
| 4,900.0 | 4,869.2 | 4,763.5 | 4,665.6 | 12.7 | 18.3 | 120.47 | 798.9 | -477.5 | 1,111.8 | 1,088.3 | 23.53 | 47.259 | |
| 5,000.0 | 4,968.5 | 4,860.6 | 4,760.4 | 13.0 | 18.7 | 120.40 | 816.2 | -489.4 | 1,136.0 | 1,112.0 | 24.02 | 47.298 | |

# Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-3D - DD - DD

**Offset Site Error:** 0.0 ft

**Survey Program:** 170-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 | 10.0 | 10.0 | 0.0 | 0.0 | -134.50 | -6.9 | -7.0 | 9.9 | | | | |
| 100.0 | 100.0 | 110.0 | 110.0 | 0.1 | 0.2 | -133.51 | -7.0 | -7.4 | 10.1 | 9.8 | 0.31 | 32.778 | ES |
| 200.0 | 200.0 | 209.8 | 209.8 | 0.3 | 0.3 | -130.87 | -7.2 | -8.3 | 11.0 | 10.4 | 0.64 | 17.132 | |
| 300.0 | 300.0 | 309.2 | 309.1 | 0.5 | 0.5 | -3.07 | -9.0 | -12.2 | 13.4 | 12.4 | 0.99 | 13.559 | |
| 400.0 | 399.8 | 408.8 | 408.4 | 0.7 | 0.7 | 1.04 | -12.2 | -18.9 | 15.6 | 14.2 | 1.34 | 11.659 | |
| 500.0 | 499.5 | 508.2 | 507.1 | 0.9 | 1.0 | 1.30 | -18.2 | -28.2 | 18.1 | 16.4 | 1.68 | 10.743 | |
| 600.0 | 598.8 | 607.5 | 605.4 | 1.2 | 1.3 | -1.60 | -26.9 | -39.5 | 21.0 | 18.9 | 2.03 | 10.314 | |
| 700.0 | 698.1 | 707.0 | 703.4 | 1.4 | 1.6 | -10.12 | -39.7 | -51.4 | 26.8 | 24.4 | 2.39 | 11.181 | |
| 800.0 | 797.4 | 806.4 | 801.2 | 1.7 | 1.9 | -20.57 | -54.8 | -61.3 | 33.6 | 30.8 | 2.80 | 11.993 | |
| 900.0 | 896.7 | 906.4 | 899.5 | 1.9 | 2.3 | -28.06 | -70.4 | -71.0 | 41.4 | 38.1 | 3.25 | 12.737 | |
| 1,000.0 | 996.0 | 1,006.6 | 998.2 | 2.2 | 2.6 | -33.12 | -84.8 | -80.2 | 48.2 | 44.5 | 3.72 | 12.985 | |
| 1,100.0 | 1,095.3 | 1,106.3 | 1,096.4 | 2.5 | 2.9 | -35.67 | -98.2 | -90.2 | 54.9 | 50.7 | 4.17 | 13.168 | |
| 1,200.0 | 1,194.7 | 1,206.8 | 1,195.6 | 2.7 | 3.3 | -37.42 | -111.2 | -100.5 | 61.1 | 56.5 | 4.63 | 13.206 | |
| 1,300.0 | 1,294.0 | 1,306.6 | 1,294.1 | 3.0 | 3.6 | -38.99 | -123.5 | -110.3 | 66.7 | 61.6 | 5.09 | 13.106 | |
| 1,400.0 | 1,393.3 | 1,407.0 | 1,393.2 | 3.3 | 3.9 | -39.90 | -135.5 | -120.5 | 72.1 | 66.6 | 5.55 | 13.003 | |
| 1,500.0 | 1,492.6 | 1,508.4 | 1,493.8 | 3.5 | 4.2 | -41.66 | -146.2 | -129.2 | 75.7 | 69.7 | 6.03 | 12.555 | |
| 1,600.0 | 1,591.9 | 1,609.6 | 1,594.3 | 3.8 | 4.5 | -44.67 | -155.9 | -135.7 | 78.0 | 71.5 | 6.57 | 11.872 | |
| 1,700.0 | 1,691.2 | 1,710.4 | 1,694.5 | 4.1 | 4.7 | -47.61 | -163.9 | -141.7 | 78.8 | 71.6 | 7.13 | 11.043 | |
| 1,800.0 | 1,790.5 | 1,810.6 | 1,794.3 | 4.4 | 4.9 | -50.89 | -171.3 | -147.1 | 79.1 | 71.4 | 7.72 | 10.255 | |
| 1,900.0 | 1,889.8 | 1,910.1 | 1,893.4 | 4.6 | 5.2 | -54.62 | -179.1 | -151.7 | 80.2 | 71.9 | 8.33 | 9.624 | |
| 2,000.0 | 1,989.2 | 2,011.1 | 1,994.0 | 4.9 | 5.4 | -57.76 | -186.5 | -157.1 | 81.0 | 72.0 | 8.95 | 9.051 | |
| 2,052.9 | 2,041.7 | 2,064.1 | 2,046.8 | 5.0 | 5.5 | -59.20 | -189.8 | -160.3 | 80.9 | 71.6 | 9.27 | 8.732 | |
| 2,100.0 | 2,088.5 | 2,110.7 | 2,093.2 | 5.2 | 5.6 | -60.12 | -192.9 | -163.5 | 81.1 | 71.5 | 9.54 | 8.501 | |
| 2,200.0 | 2,187.8 | 2,210.2 | 2,192.1 | 5.4 | 5.9 | -61.42 | -200.7 | -171.3 | 82.6 | 72.5 | 10.10 | 8.177 | |
| 2,300.0 | 2,287.1 | 2,310.9 | 2,292.1 | 5.7 | 6.2 | -61.62 | -207.8 | -180.8 | 83.1 | 72.5 | 10.62 | 7.830 | |
| 2,400.0 | 2,386.4 | 2,407.4 | 2,387.5 | 6.0 | 6.5 | -60.17 | -216.8 | -192.1 | 85.9 | 74.9 | 11.06 | 7.771 | SF |
| 2,500.0 | 2,485.7 | 2,506.9 | 2,485.6 | 6.2 | 6.8 | -58.32 | -228.0 | -204.4 | 90.6 | 79.1 | 11.45 | 7.908 | |
| 2,600.0 | 2,585.0 | 2,604.8 | 2,582.0 | 6.5 | 7.2 | -57.09 | -240.6 | -215.7 | 96.9 | 85.0 | 11.87 | 8.161 | |
| 2,700.0 | 2,684.3 | 2,705.0 | 2,680.5 | 6.8 | 7.5 | -55.58 | -254.0 | -228.1 | 103.9 | 91.6 | 12.27 | 8.465 | |
| 2,800.0 | 2,783.6 | 2,805.0 | 2,779.1 | 7.0 | 7.9 | -54.69 | -266.8 | -239.6 | 110.3 | 97.6 | 12.70 | 8.687 | |
| 2,900.0 | 2,883.0 | 2,903.1 | 2,875.6 | 7.3 | 8.2 | -53.97 | -280.1 | -250.8 | 117.5 | 104.4 | 13.13 | 8.947 | |
| 3,000.0 | 2,982.3 | 3,001.6 | 2,972.2 | 7.6 | 8.6 | -52.96 | -295.0 | -263.0 | 126.2 | 112.7 | 13.54 | 9.326 | |
| 3,100.0 | 3,081.6 | 3,101.5 | 3,070.2 | 7.8 | 9.0 | -52.21 | -310.0 | -274.9 | 135.0 | 121.0 | 13.96 | 9.667 | |
| 3,200.0 | 3,180.9 | 3,200.7 | 3,167.5 | 8.1 | 9.4 | -51.10 | -324.9 | -287.9 | 143.9 | 129.5 | 14.35 | 10.024 | |
| 3,300.0 | 3,280.2 | 3,299.6 | 3,264.2 | 8.4 | 9.8 | -49.98 | -340.0 | -301.3 | 153.1 | 138.4 | 14.72 | 10.396 | |
| 3,400.0 | 3,379.5 | 3,398.6 | 3,361.2 | 8.7 | 10.2 | -49.25 | -355.7 | -314.0 | 162.9 | 147.7 | 15.12 | 10.768 | |
| 3,500.0 | 3,478.8 | 3,497.8 | 3,458.3 | 8.9 | 10.6 | -48.73 | -371.7 | -326.4 | 172.8 | 157.3 | 15.54 | 11.119 | |
| 3,600.0 | 3,578.1 | 3,597.5 | 3,555.8 | 9.2 | 10.9 | -48.22 | -387.8 | -338.9 | 182.9 | 166.9 | 15.96 | 11.461 | |
| 3,700.0 | 3,677.5 | 3,699.3 | 3,655.6 | 9.5 | 11.3 | -47.73 | -403.7 | -351.8 | 192.4 | 176.0 | 16.38 | 11.745 | |
| 3,800.0 | 3,776.8 | 3,802.0 | 3,756.5 | 9.7 | 11.7 | -47.19 | -418.1 | -364.8 | 200.4 | 183.6 | 16.79 | 11.934 | |
| 3,900.0 | 3,876.1 | 3,899.8 | 3,852.5 | 10.0 | 12.1 | -46.80 | -431.5 | -376.9 | 208.0 | 190.8 | 17.21 | 12.088 | |
| 4,000.0 | 3,975.4 | 3,999.4 | 3,950.4 | 10.3 | 12.4 | -46.55 | -445.8 | -388.9 | 216.2 | 198.6 | 17.63 | 12.262 | |
| 4,100.0 | 4,074.7 | 4,100.1 | 4,049.4 | 10.5 | 12.8 | -46.43 | -460.1 | -400.5 | 224.2 | 206.1 | 18.08 | 12.401 | |
| 4,200.0 | 4,174.0 | 4,199.4 | 4,147.1 | 10.8 | 13.2 | -46.42 | -474.1 | -411.5 | 232.0 | 213.5 | 18.53 | 12.517 | |
| 4,300.0 | 4,273.3 | 4,298.8 | 4,244.7 | 11.1 | 13.5 | -46.19 | -488.3 | -423.4 | 240.1 | 221.1 | 18.97 | 12.657 | |
| 4,400.0 | 4,372.6 | 4,401.5 | 4,345.7 | 11.3 | 13.9 | -45.90 | -502.2 | -436.0 | 247.6 | 228.2 | 19.39 | 12.765 | |
| 4,500.0 | 4,471.9 | 4,502.1 | 4,444.9 | 11.6 | 14.2 | -45.78 | -514.9 | -447.5 | 253.9 | 234.0 | 19.84 | 12.799 | |
| 4,600.0 | 4,571.3 | 4,599.0 | 4,540.2 | 11.9 | 14.6 | -45.68 | -527.9 | -458.6 | 261.1 | 240.8 | 20.28 | 12.876 | |
| 4,700.0 | 4,670.6 | 4,700.0 | 4,639.5 | 12.2 | 15.0 | -45.41 | -541.7 | -471.1 | 268.7 | 248.0 | 20.70 | 12.981 | |
| 4,800.0 | 4,769.9 | 4,803.9 | 4,741.9 | 12.4 | 15.3 | -45.30 | -554.8 | -482.9 | 275.1 | 253.9 | 21.14 | 13.011 | |
| 4,900.0 | 4,869.2 | 4,903.8 | 4,840.6 | 12.7 | 15.6 | -45.51 | -566.6 | -492.7 | 280.4 | 258.7 | 21.62 | 12.970 | |
| 5,000.0 | 4,968.5 | 5,002.0 | 4,937.6 | 13.0 | 15.9 | -45.89 | -579.1 | -501.5 | 286.4 | 264.2 | 22.12 | 12.942 | |

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

# Anticollision Report

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-3D - DD - DD

**Offset Site Error:** 0.0 ft

**Survey Program:** 170-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 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 5,100.0 | 5,067.8 | 5,103.6 | 5,037.9 | 13.2 | 16.3 | -46.15 | -591.9 | -511.2 | 292.4 | 269.8 | 22.63 | 12.922 | |
| 5,200.0 | 5,167.1 | 5,202.7 | 5,135.8 | 13.5 | 16.6 | -46.22 | -603.7 | -521.4 | 297.9 | 274.8 | 23.10 | 12.897 | |
| 5,300.0 | 5,266.4 | 5,301.8 | 5,233.5 | 13.8 | 16.9 | -46.17 | -615.9 | -532.3 | 303.9 | 280.4 | 23.54 | 12.908 | |
| 5,400.0 | 5,365.7 | 5,405.6 | 5,336.0 | 14.0 | 17.3 | -46.23 | -628.4 | -543.2 | 309.5 | 285.5 | 24.02 | 12.885 | |
| 5,500.0 | 5,465.1 | 5,507.3 | 5,436.6 | 14.3 | 17.6 | -46.38 | -639.5 | -553.0 | 313.9 | 289.4 | 24.50 | 12.813 | |
| 5,600.0 | 5,564.4 | 5,610.5 | 5,538.8 | 14.6 | 17.9 | -46.66 | -650.2 | -562.2 | 317.6 | 292.6 | 25.01 | 12.700 | |
| 5,700.0 | 5,663.7 | 5,714.6 | 5,642.2 | 14.8 | 18.2 | -46.98 | -659.7 | -571.1 | 320.0 | 294.5 | 25.53 | 12.536 | |
| 5,800.0 | 5,763.0 | 5,810.9 | 5,737.6 | 15.1 | 18.4 | -47.34 | -668.7 | -578.9 | 322.6 | 296.5 | 26.04 | 12.389 | |
| 5,900.0 | 5,862.3 | 5,913.2 | 5,839.2 | 15.4 | 18.7 | -47.81 | -678.5 | -586.7 | 325.3 | 298.7 | 26.58 | 12.239 | |
| 6,000.0 | 5,961.6 | 6,016.0 | 5,941.4 | 15.7 | 19.0 | -48.31 | -687.3 | -594.1 | 326.9 | 299.8 | 27.13 | 12.051 | |
| 6,100.0 | 6,061.0 | 6,113.2 | 6,038.0 | 15.9 | 19.2 | -49.08 | -696.2 | -599.4 | 329.2 | 301.5 | 27.70 | 11.883 | |
| 6,200.0 | 6,160.6 | 6,217.8 | 6,142.0 | 16.1 | 19.4 | -49.80 | -705.7 | -603.7 | 333.0 | 304.8 | 28.22 | 11.799 | |
| 6,300.0 | 6,260.4 | 6,329.5 | 6,253.5 | 16.3 | 19.6 | -50.07 | -713.1 | -607.8 | 336.6 | 308.0 | 28.62 | 11.763 | |
| 6,400.0 | 6,360.4 | 6,440.0 | 6,363.8 | 16.4 | 19.8 | -49.92 | -716.4 | -610.9 | 338.7 | 309.9 | 28.86 | 11.736 | |
| 6,500.0 | 6,460.4 | 6,542.7 | 6,466.5 | 16.5 | 19.9 | -53.29 | -717.6 | -612.3 | 339.8 | 310.7 | 29.12 | 11.668 | |
| 6,600.0 | 6,560.4 | 6,642.2 | 6,566.0 | 16.7 | 20.0 | -53.31 | -718.7 | -613.3 | 340.3 | 310.9 | 29.42 | 11.566 | |
| 6,700.0 | 6,660.4 | 6,742.8 | 6,666.6 | 16.8 | 20.2 | -53.34 | -719.8 | -614.3 | 340.7 | 311.0 | 29.72 | 11.463 | |
| 6,800.0 | 6,760.4 | 6,844.0 | 6,767.9 | 17.0 | 20.3 | -53.33 | -720.6 | -615.5 | 340.9 | 310.9 | 30.02 | 11.354 | |
| 6,900.0 | 6,860.4 | 6,944.4 | 6,868.2 | 17.1 | 20.4 | -53.30 | -721.1 | -616.8 | 340.8 | 310.5 | 30.32 | 11.241 | |
| 7,000.0 | 6,960.4 | 7,044.8 | 6,968.6 | 17.2 | 20.5 | -53.29 | -721.6 | -618.0 | 340.6 | 310.0 | 30.62 | 11.124 | |
| 7,047.3 | 7,007.6 | 7,091.2 | 7,015.0 | 17.3 | 20.6 | -53.27 | -721.8 | -618.6 | 340.5 | 309.8 | 30.76 | 11.072 | |
| 7,100.0 | 7,060.3 | 7,143.0 | 7,066.8 | 17.4 | 20.7 | -53.23 | -722.2 | -619.4 | 340.6 | 309.7 | 30.91 | 11.020 | |
| 7,200.0 | 7,160.3 | 7,243.4 | 7,167.2 | 17.5 | 20.8 | -53.11 | -723.0 | -621.3 | 340.8 | 309.6 | 31.19 | 10.926 | |
| 7,300.0 | 7,260.3 | 7,342.8 | 7,266.5 | 17.6 | 20.9 | -52.96 | -723.7 | -623.3 | 341.1 | 309.6 | 31.47 | 10.837 | |
| 7,400.0 | 7,360.3 | 7,442.8 | 7,366.5 | 17.8 | 21.1 | -52.76 | -724.6 | -625.7 | 341.4 | 309.7 | 31.74 | 10.755 | |
| 7,500.0 | 7,460.3 | 7,543.6 | 7,467.3 | 17.9 | 21.2 | -52.55 | -725.3 | -628.1 | 341.6 | 309.6 | 32.02 | 10.669 | |
| 7,600.0 | 7,560.3 | 7,643.3 | 7,566.9 | 18.1 | 21.3 | -52.37 | -725.9 | -630.3 | 341.7 | 309.5 | 32.29 | 10.583 | |
| 7,700.0 | 7,660.3 | 7,742.9 | 7,666.6 | 18.2 | 21.5 | -52.20 | -726.6 | -632.4 | 341.9 | 309.4 | 32.57 | 10.497 | |
| 7,800.0 | 7,760.3 | 7,841.7 | 7,765.3 | 18.4 | 21.6 | -52.03 | -727.6 | -634.6 | 342.4 | 309.6 | 32.85 | 10.423 | |
| 7,900.0 | 7,860.3 | 7,940.8 | 7,864.4 | 18.5 | 21.7 | -51.85 | -728.9 | -636.9 | 343.2 | 310.1 | 33.13 | 10.358 | |
| 8,000.0 | 7,960.3 | 8,040.5 | 7,964.0 | 18.7 | 21.9 | -51.64 | -730.3 | -639.4 | 344.2 | 310.8 | 33.41 | 10.302 | |
| 8,100.0 | 8,060.3 | 8,140.9 | 8,064.3 | 18.8 | 22.0 | -51.39 | -731.7 | -642.2 | 345.2 | 311.5 | 33.68 | 10.248 | |
| 8,200.0 | 8,160.3 | 8,240.3 | 8,163.8 | 18.9 | 22.2 | -51.18 | -733.1 | -644.7 | 346.1 | 312.1 | 33.96 | 10.191 | |
| 8,300.0 | 8,260.2 | 8,339.2 | 8,262.6 | 19.1 | 22.3 | -51.00 | -734.8 | -647.1 | 347.3 | 313.1 | 34.24 | 10.143 | |
| 8,400.0 | 8,360.2 | 8,439.6 | 8,362.9 | 19.2 | 22.5 | -50.80 | -736.6 | -649.6 | 348.7 | 314.2 | 34.53 | 10.099 | |
| 8,500.0 | 8,460.2 | 8,540.2 | 8,463.5 | 19.4 | 22.7 | -50.57 | -738.2 | -652.3 | 349.9 | 315.1 | 34.81 | 10.051 | |
| 8,600.0 | 8,560.2 | 8,640.7 | 8,563.9 | 19.5 | 22.8 | -50.34 | -739.6 | -655.0 | 350.9 | 315.8 | 35.09 | 10.000 | |
| 8,700.0 | 8,660.2 | 8,740.4 | 8,663.6 | 19.7 | 23.0 | -50.09 | -741.0 | -657.8 | 351.9 | 316.5 | 35.37 | 9.949 | |
| 8,800.0 | 8,760.2 | 8,842.1 | 8,765.3 | 19.8 | 23.1 | -49.83 | -742.2 | -660.6 | 352.8 | 317.1 | 35.65 | 9.894 | |
| 8,900.0 | 8,860.2 | 8,942.0 | 8,865.1 | 20.0 | 23.3 | -49.58 | -743.2 | -663.4 | 353.3 | 317.4 | 35.93 | 9.833 | |
| 9,000.0 | 8,960.2 | 9,042.2 | 8,965.3 | 20.1 | 23.4 | -49.32 | -744.1 | -666.2 | 353.9 | 317.7 | 36.21 | 9.772 | |
| 9,100.0 | 9,060.2 | 9,142.8 | 9,065.8 | 20.3 | 23.6 | -49.02 | -744.8 | -669.3 | 354.3 | 317.9 | 36.49 | 9.711 | |
| 9,200.0 | 9,160.2 | 9,243.5 | 9,166.5 | 20.4 | 23.7 | -48.70 | -745.4 | -672.4 | 354.6 | 317.9 | 36.76 | 9.646 | |
| 9,300.0 | 9,260.2 | 9,344.6 | 9,267.6 | 20.6 | 23.9 | -48.38 | -745.7 | -675.5 | 354.7 | 317.6 | 37.04 | 9.575 | |
| 9,400.0 | 9,360.2 | 9,444.9 | 9,367.7 | 20.7 | 24.0 | -48.06 | -745.7 | -678.5 | 354.4 | 317.1 | 37.31 | 9.499 | |
| 9,500.0 | 9,460.1 | 9,544.9 | 9,467.7 | 20.9 | 24.1 | -47.72 | -745.7 | -681.7 | 354.3 | 316.7 | 37.59 | 9.425 | |
| 9,531.7 | 9,491.8 | 9,576.6 | 9,499.4 | 20.9 | 24.2 | -47.61 | -745.7 | -682.6 | 354.2 | 316.5 | 37.67 | 9.402 | |
| 9,551.9 | 9,512.0 | 9,578.0 | 9,500.8 | 21.0 | 24.2 | -47.60 | -745.7 | -682.7 | 354.6 | 316.9 | 37.71 | 9.405 | |

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-5D - DD - Plan #3 — **Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 45.55 | 6.9 | 7.0 | 9.9 | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 45.55 | 6.9 | 7.0 | 9.9 | 9.6 | 0.30 | 33.265 | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 45.55 | 6.9 | 7.0 | 9.9 | 9.2 | 0.65 | 15.284 | CC, ES |
| 300.0 | 300.0 | 299.8 | 299.8 | 0.5 | 0.5 | 178.58 | 6.0 | 8.5 | 12.2 | 11.2 | 1.00 | 12.243 | SF |
| 400.0 | 399.8 | 399.1 | 399.0 | 0.7 | 0.7 | -167.50 | 3.4 | 13.0 | 20.2 | 18.9 | 1.36 | 14.899 | |
| 500.0 | 499.5 | 497.4 | 496.9 | 0.9 | 0.9 | -159.31 | -0.9 | 20.4 | 34.4 | 32.7 | 1.73 | 19.923 | |
| 600.0 | 598.8 | 594.3 | 593.0 | 1.2 | 1.2 | -154.83 | -6.8 | 30.4 | 54.0 | 51.9 | 2.12 | 25.496 | |
| 700.0 | 698.1 | 691.4 | 689.2 | 1.4 | 1.5 | -151.74 | -13.8 | 42.5 | 75.9 | 73.3 | 2.52 | 30.106 | |
| 800.0 | 797.4 | 789.0 | 785.7 | 1.7 | 1.7 | -150.00 | -21.0 | 54.7 | 97.9 | 95.0 | 2.92 | 33.463 | |
| 900.0 | 896.7 | 886.5 | 882.1 | 1.9 | 2.0 | -148.89 | -28.1 | 67.0 | 120.0 | 116.6 | 3.33 | 35.991 | |
| 1,000.0 | 996.0 | 984.0 | 978.6 | 2.2 | 2.3 | -148.13 | -35.2 | 79.2 | 142.1 | 138.3 | 3.74 | 37.958 | |
| 1,100.0 | 1,095.3 | 1,081.5 | 1,075.1 | 2.5 | 2.6 | -147.58 | -42.4 | 91.4 | 164.2 | 160.0 | 4.15 | 39.529 | |
| 1,200.0 | 1,194.7 | 1,179.0 | 1,171.6 | 2.7 | 2.9 | -147.15 | -49.5 | 103.6 | 186.3 | 181.7 | 4.57 | 40.812 | |
| 1,300.0 | 1,294.0 | 1,276.5 | 1,268.1 | 3.0 | 3.2 | -146.82 | -56.6 | 115.8 | 208.4 | 203.5 | 4.98 | 41.879 | |
| 1,400.0 | 1,393.3 | 1,374.0 | 1,364.5 | 3.3 | 3.5 | -146.55 | -63.8 | 128.1 | 230.6 | 225.2 | 5.39 | 42.779 | |
| 1,500.0 | 1,492.6 | 1,471.5 | 1,461.0 | 3.5 | 3.8 | -146.33 | -70.9 | 140.3 | 252.7 | 246.9 | 5.80 | 43.549 | |
| 1,600.0 | 1,591.9 | 1,569.0 | 1,557.5 | 3.8 | 4.1 | -146.14 | -78.1 | 152.5 | 274.9 | 268.7 | 6.22 | 44.215 | |
| 1,700.0 | 1,691.2 | 1,666.6 | 1,654.0 | 4.1 | 4.4 | -145.98 | -85.2 | 164.7 | 297.1 | 290.4 | 6.63 | 44.796 | |
| 1,800.0 | 1,790.5 | 1,764.1 | 1,750.5 | 4.4 | 4.7 | -145.84 | -92.3 | 176.9 | 319.2 | 312.2 | 7.05 | 45.308 | |
| 1,900.0 | 1,889.8 | 1,861.6 | 1,846.9 | 4.6 | 5.0 | -145.72 | -99.5 | 189.1 | 341.4 | 333.9 | 7.46 | 45.761 | |
| 2,000.0 | 1,989.2 | 1,959.1 | 1,943.4 | 4.9 | 5.3 | -145.62 | -106.6 | 201.4 | 363.5 | 355.7 | 7.87 | 46.167 | |
| 2,100.0 | 2,088.5 | 2,056.6 | 2,039.9 | 5.2 | 5.6 | -145.53 | -113.8 | 213.6 | 385.7 | 377.4 | 8.29 | 46.531 | |
| 2,200.0 | 2,187.8 | 2,154.1 | 2,136.4 | 5.4 | 5.9 | -145.44 | -120.9 | 225.8 | 407.9 | 399.2 | 8.70 | 46.860 | |
| 2,300.0 | 2,287.1 | 2,251.6 | 2,232.9 | 5.7 | 6.2 | -145.37 | -128.0 | 238.0 | 430.0 | 420.9 | 9.12 | 47.159 | |
| 2,400.0 | 2,386.4 | 2,349.1 | 2,329.3 | 6.0 | 6.5 | -145.30 | -135.2 | 250.2 | 452.2 | 442.6 | 9.53 | 47.432 | |
| 2,500.0 | 2,485.7 | 2,446.7 | 2,425.8 | 6.2 | 6.8 | -145.24 | -142.3 | 262.5 | 474.3 | 464.4 | 9.95 | 47.681 | |
| 2,600.0 | 2,585.0 | 2,544.2 | 2,522.3 | 6.5 | 7.1 | -145.19 | -149.4 | 274.7 | 496.5 | 486.1 | 10.36 | 47.910 | |
| 2,700.0 | 2,684.3 | 2,641.7 | 2,618.8 | 6.8 | 7.4 | -145.14 | -156.6 | 286.9 | 518.7 | 507.9 | 10.78 | 48.121 | |
| 2,800.0 | 2,783.6 | 2,739.2 | 2,715.3 | 7.0 | 7.7 | -145.09 | -163.7 | 299.1 | 540.8 | 529.6 | 11.19 | 48.317 | |
| 2,900.0 | 2,883.0 | 2,836.7 | 2,811.7 | 7.3 | 8.0 | -145.05 | -170.9 | 311.3 | 563.0 | 551.4 | 11.61 | 48.498 | |
| 3,000.0 | 2,982.3 | 2,934.2 | 2,908.2 | 7.6 | 8.3 | -145.01 | -178.0 | 323.5 | 585.2 | 573.1 | 12.02 | 48.667 | |
| 3,100.0 | 3,081.6 | 3,031.7 | 3,004.7 | 7.8 | 8.6 | -144.97 | -185.1 | 335.8 | 607.3 | 594.9 | 12.44 | 48.824 | |
| 3,200.0 | 3,180.9 | 3,129.2 | 3,101.2 | 8.1 | 8.9 | -144.94 | -192.3 | 348.0 | 629.5 | 616.6 | 12.85 | 48.971 | |
| 3,300.0 | 3,280.2 | 3,226.7 | 3,197.6 | 8.4 | 9.2 | -144.91 | -199.4 | 360.2 | 651.7 | 638.4 | 13.27 | 49.109 | |
| 3,400.0 | 3,379.5 | 3,324.3 | 3,294.1 | 8.7 | 9.5 | -144.88 | -206.5 | 372.4 | 673.8 | 660.1 | 13.69 | 49.238 | |
| 3,500.0 | 3,478.8 | 3,421.8 | 3,390.6 | 8.9 | 9.8 | -144.85 | -213.7 | 384.6 | 696.0 | 681.9 | 14.10 | 49.359 | |
| 3,600.0 | 3,578.1 | 3,519.3 | 3,487.1 | 9.2 | 10.1 | -144.82 | -220.8 | 396.9 | 718.2 | 703.7 | 14.52 | 49.474 | |
| 3,700.0 | 3,677.5 | 3,616.8 | 3,583.6 | 9.5 | 10.4 | -144.80 | -228.0 | 409.1 | 740.3 | 725.4 | 14.93 | 49.582 | |
| 3,800.0 | 3,776.8 | 3,714.3 | 3,680.0 | 9.7 | 10.7 | -144.78 | -235.1 | 421.3 | 762.5 | 747.2 | 15.35 | 49.684 | |
| 3,900.0 | 3,876.1 | 3,811.8 | 3,776.5 | 10.0 | 11.0 | -144.75 | -242.2 | 433.5 | 784.7 | 768.9 | 15.76 | 49.781 | |
| 4,000.0 | 3,975.4 | 3,909.3 | 3,873.0 | 10.3 | 11.3 | -144.73 | -249.4 | 445.7 | 806.8 | 790.7 | 16.18 | 49.873 | |
| 4,100.0 | 4,074.7 | 4,006.8 | 3,969.5 | 10.5 | 11.6 | -144.72 | -256.5 | 457.9 | 829.0 | 812.4 | 16.59 | 49.960 | |
| 4,200.0 | 4,174.0 | 4,104.3 | 4,066.0 | 10.8 | 11.9 | -144.70 | -263.7 | 470.2 | 851.2 | 834.2 | 17.01 | 50.043 | |
| 4,300.0 | 4,273.3 | 4,201.9 | 4,162.4 | 11.1 | 12.2 | -144.68 | -270.8 | 482.4 | 873.3 | 855.9 | 17.42 | 50.122 | |
| 4,400.0 | 4,372.6 | 4,299.4 | 4,258.9 | 11.3 | 12.5 | -144.66 | -277.9 | 494.6 | 895.5 | 877.7 | 17.84 | 50.197 | |
| 4,500.0 | 4,471.9 | 4,396.9 | 4,355.4 | 11.6 | 12.8 | -144.65 | -285.1 | 506.8 | 917.7 | 899.4 | 18.26 | 50.268 | |
| 4,600.0 | 4,571.3 | 4,494.4 | 4,451.9 | 11.9 | 13.1 | -144.63 | -292.2 | 519.0 | 939.8 | 921.2 | 18.67 | 50.337 | |
| 4,700.0 | 4,670.6 | 4,591.9 | 4,548.4 | 12.2 | 13.4 | -144.62 | -299.3 | 531.3 | 962.0 | 942.9 | 19.09 | 50.402 | |
| 4,800.0 | 4,769.9 | 4,689.4 | 4,644.8 | 12.4 | 13.7 | -144.60 | -306.5 | 543.5 | 984.2 | 964.7 | 19.50 | 50.465 | |
| 4,900.0 | 4,869.2 | 4,786.9 | 4,741.3 | 12.7 | 14.0 | -144.59 | -313.6 | 555.7 | 1,006.3 | 986.4 | 19.92 | 50.525 | |
| 5,000.0 | 4,968.5 | 4,884.4 | 4,837.8 | 13.0 | 14.3 | -144.58 | -320.8 | 567.9 | 1,028.5 | 1,008.2 | 20.33 | 50.583 | |
| 5,100.0 | 5,067.8 | 4,982.0 | 4,934.3 | 13.2 | 14.6 | -144.57 | -327.9 | 580.1 | 1,050.7 | 1,029.9 | 20.75 | 50.638 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-5D - DD - Plan #3

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 5,167.1 | 5,079.5 | 5,030.8 | 13.5 | 14.9 | -144.55 | -335.0 | 592.3 | 1,072.8 | 1,051.7 | 21.16 | 50.691 | |
| 5,300.0 | 5,266.4 | 5,177.0 | 5,127.2 | 13.8 | 15.2 | -144.54 | -342.2 | 604.6 | 1,095.0 | 1,073.4 | 21.58 | 50.742 | |
| 5,400.0 | 5,365.7 | 5,274.5 | 5,223.7 | 14.0 | 15.5 | -144.53 | -349.3 | 616.8 | 1,117.2 | 1,095.2 | 22.00 | 50.791 | |
| 5,500.0 | 5,465.1 | 5,372.0 | 5,320.2 | 14.3 | 15.8 | -144.52 | -356.5 | 629.0 | 1,139.4 | 1,116.9 | 22.41 | 50.838 | |

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

**Offset Design** Chevron C-D29-596 - Chevron #29-8D - DD - Plan #3

**Offset Site Error:** 0.0 ft

**Survey Program:** 0-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 | 45.42 | 49.2 | 49.9 | 70.0 | | | | |
| 100.0 | 100.0 | 100.0 | 100.0 | 0.1 | 0.1 | 45.42 | 49.2 | 49.9 | 70.0 | 69.7 | 0.30 | 236.056 | |
| 200.0 | 200.0 | 200.0 | 200.0 | 0.3 | 0.3 | 45.42 | 49.2 | 49.9 | 70.0 | 69.4 | 0.65 | 108.458 | CC, ES |
| 300.0 | 300.0 | 297.6 | 297.6 | 0.5 | 0.5 | 168.92 | 50.6 | 50.8 | 73.4 | 72.4 | 0.99 | 74.102 | |
| 400.0 | 399.8 | 394.5 | 394.3 | 0.7 | 0.7 | 168.74 | 54.8 | 53.3 | 83.5 | 82.1 | 1.33 | 62.549 | |
| 500.0 | 499.5 | 490.1 | 489.6 | 0.9 | 0.9 | 168.52 | 61.7 | 57.6 | 100.2 | 98.5 | 1.68 | 59.731 | SF |
| 600.0 | 598.8 | 584.0 | 582.8 | 1.2 | 1.1 | 168.29 | 71.0 | 63.4 | 122.7 | 120.7 | 2.02 | 60.730 | |
| 700.0 | 698.1 | 676.3 | 674.1 | 1.4 | 1.4 | 167.89 | 82.8 | 70.6 | 148.5 | 146.2 | 2.37 | 62.800 | |
| 800.0 | 797.4 | 767.3 | 763.6 | 1.7 | 1.7 | 167.40 | 96.8 | 79.2 | 177.4 | 174.7 | 2.71 | 65.503 | |
| 900.0 | 896.7 | 862.6 | 857.1 | 1.9 | 2.1 | 166.95 | 112.7 | 89.0 | 207.5 | 204.5 | 3.06 | 67.820 | |
| 1,000.0 | 996.0 | 958.0 | 950.6 | 2.2 | 2.4 | 166.61 | 128.5 | 98.7 | 237.7 | 234.3 | 3.41 | 69.673 | |
| 1,100.0 | 1,095.3 | 1,053.3 | 1,044.1 | 2.5 | 2.8 | 166.34 | 144.4 | 108.5 | 267.9 | 264.2 | 3.76 | 71.176 | |
| 1,200.0 | 1,194.7 | 1,148.6 | 1,137.6 | 2.7 | 3.1 | 166.13 | 160.2 | 118.2 | 298.1 | 294.0 | 4.12 | 72.418 | |
| 1,300.0 | 1,294.0 | 1,243.9 | 1,231.1 | 3.0 | 3.5 | 165.96 | 176.0 | 128.0 | 328.3 | 323.8 | 4.47 | 73.463 | |
| 1,400.0 | 1,393.3 | 1,339.3 | 1,324.6 | 3.3 | 3.9 | 165.82 | 191.9 | 137.7 | 358.5 | 353.7 | 4.82 | 74.354 | |
| 1,500.0 | 1,492.6 | 1,434.6 | 1,418.1 | 3.5 | 4.2 | 165.70 | 207.7 | 147.5 | 388.7 | 383.5 | 5.17 | 75.123 | |
| 1,600.0 | 1,591.9 | 1,529.9 | 1,511.6 | 3.8 | 4.6 | 165.60 | 223.6 | 157.2 | 418.9 | 413.4 | 5.53 | 75.793 | |
| 1,700.0 | 1,691.2 | 1,625.3 | 1,605.1 | 4.1 | 5.0 | 165.51 | 239.4 | 167.0 | 449.1 | 443.2 | 5.88 | 76.382 | |
| 1,800.0 | 1,790.5 | 1,720.6 | 1,698.6 | 4.4 | 5.3 | 165.43 | 255.3 | 176.7 | 479.3 | 473.1 | 6.23 | 76.904 | |
| 1,900.0 | 1,889.8 | 1,815.9 | 1,792.1 | 4.6 | 5.7 | 165.36 | 271.1 | 186.5 | 509.5 | 502.9 | 6.59 | 77.370 | |
| 2,000.0 | 1,989.2 | 1,911.2 | 1,885.5 | 4.9 | 6.0 | 165.30 | 286.9 | 196.2 | 539.7 | 532.8 | 6.94 | 77.788 | |
| 2,100.0 | 2,088.5 | 2,006.6 | 1,979.0 | 5.2 | 6.4 | 165.24 | 302.8 | 206.0 | 569.9 | 562.6 | 7.29 | 78.165 | |
| 2,200.0 | 2,187.8 | 2,101.9 | 2,072.5 | 5.4 | 6.8 | 165.19 | 318.6 | 215.7 | 600.1 | 592.5 | 7.64 | 78.508 | |
| 2,300.0 | 2,287.1 | 2,197.2 | 2,166.0 | 5.7 | 7.1 | 165.15 | 334.5 | 225.5 | 630.3 | 622.3 | 8.00 | 78.820 | |
| 2,400.0 | 2,386.4 | 2,292.5 | 2,259.5 | 6.0 | 7.5 | 165.11 | 350.3 | 235.2 | 660.5 | 652.2 | 8.35 | 79.106 | |
| 2,500.0 | 2,485.7 | 2,387.9 | 2,353.0 | 6.2 | 7.9 | 165.07 | 366.2 | 245.0 | 690.7 | 682.0 | 8.70 | 79.368 | |
| 2,600.0 | 2,585.0 | 2,483.2 | 2,446.5 | 6.5 | 8.2 | 165.04 | 382.0 | 254.7 | 721.0 | 711.9 | 9.06 | 79.610 | |
| 2,700.0 | 2,684.3 | 2,578.5 | 2,540.0 | 6.8 | 8.6 | 165.01 | 397.8 | 264.5 | 751.2 | 741.7 | 9.41 | 79.833 | |
| 2,800.0 | 2,783.6 | 2,673.9 | 2,633.5 | 7.0 | 9.0 | 164.98 | 413.7 | 274.2 | 781.4 | 771.6 | 9.76 | 80.041 | |
| 2,900.0 | 2,883.0 | 2,769.2 | 2,727.0 | 7.3 | 9.3 | 164.95 | 429.5 | 284.0 | 811.6 | 801.5 | 10.12 | 80.234 | |
| 3,000.0 | 2,982.3 | 2,864.5 | 2,820.5 | 7.6 | 9.7 | 164.93 | 445.4 | 293.7 | 841.8 | 831.3 | 10.47 | 80.414 | |
| 3,100.0 | 3,081.6 | 2,959.8 | 2,914.0 | 7.8 | 10.1 | 164.91 | 461.2 | 303.5 | 872.0 | 861.2 | 10.82 | 80.582 | |
| 3,200.0 | 3,180.9 | 3,055.2 | 3,007.5 | 8.1 | 10.4 | 164.88 | 477.0 | 313.2 | 902.2 | 891.0 | 11.17 | 80.739 | |
| 3,300.0 | 3,280.2 | 3,150.5 | 3,101.0 | 8.4 | 10.8 | 164.86 | 492.9 | 323.0 | 932.4 | 920.9 | 11.53 | 80.887 | |
| 3,400.0 | 3,379.5 | 3,245.8 | 3,194.5 | 8.7 | 11.2 | 164.85 | 508.7 | 332.8 | 962.6 | 950.7 | 11.88 | 81.026 | |
| 3,500.0 | 3,478.8 | 3,341.2 | 3,288.0 | 8.9 | 11.5 | 164.83 | 524.6 | 342.5 | 992.8 | 980.6 | 12.23 | 81.157 | |
| 3,600.0 | 3,578.1 | 3,436.5 | 3,381.5 | 9.2 | 11.9 | 164.81 | 540.4 | 352.3 | 1,023.0 | 1,010.4 | 12.59 | 81.280 | |
| 3,700.0 | 3,677.5 | 3,531.8 | 3,475.0 | 9.5 | 12.3 | 164.80 | 556.3 | 362.0 | 1,053.2 | 1,040.3 | 12.94 | 81.397 | |
| 3,800.0 | 3,776.8 | 3,627.1 | 3,568.5 | 9.7 | 12.6 | 164.78 | 572.1 | 371.8 | 1,083.4 | 1,070.1 | 13.29 | 81.508 | |
| 3,900.0 | 3,876.1 | 3,722.5 | 3,662.0 | 10.0 | 13.0 | 164.77 | 587.9 | 381.5 | 1,113.6 | 1,100.0 | 13.65 | 81.613 | |
| 4,000.0 | 3,975.4 | 3,817.8 | 3,755.5 | 10.3 | 13.4 | 164.75 | 603.8 | 391.3 | 1,143.9 | 1,129.9 | 14.00 | 81.712 | |

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

| | | | |
|---|---|---|---|
| **Company:** | Berry Petroleum Company (NAD 83) | **Local Co-ordinate Reference:** | Well Chevron #29-6D |
| **Project:** | Garfield County | **TVD Reference:** | Well @ 7896.0ft |
| **Reference Site:** | Chevron C-D29-596 | **MD Reference:** | Well @ 7896.0ft |
| **Site Error:** | 0.0ft | **North Reference:** | True |
| **Reference Well:** | Chevron #29-6D | **Survey Calculation Method:** | Minimum Curvature |
| **Well Error:** | 0.0ft | **Output errors are at** | 2.00 sigma |
| **Reference Wellbore** | DD | **Database:** | EDM 5000.1 US Multi Users DB |
| **Reference Design:** | Plan #3 | **Offset TVD Reference:** | Offset Datum |

Reference Depths are relative to Well @ 7896.0ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Chevron #29-6D
Coordinate System is US State Plane 1983, Colorado Central Zone
Grid Convergence at Surface is: -1.70°