



Project: Mesa County, CO
 Site: Bruton 19-06 Pad
 Well: Bruton 19-04W
 Wellbore: Wellbore #1
 Design: Design #2
 Latitude: 39.262953
 Longitude: -107.815075
 Ground Level: 7262.0
 well @ 7286.0usft (H&P #290)



PROJECT DETAILS: Mesa County, CO

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Central Zone
 System Datum: Mean Sea Level

REFERENCE INFORMATION

Co-ordinate (N/E) Reference: Well Bruton 19-04W, True North
 Vertical (TVD) Reference: well @ 7286.0usft (H&P #290)
 Section (VS) Reference: Slot - (0.0N, 0.0E)
 Measured Depth Reference: well @ 7286.0usft (H&P #290)
 Calculation Method: Minimum Curvature

WELL DETAILS: Bruton 19-04W

| +N/-S | +E/-W | Northing | Ground Level: Easting | 7262.0 Latitude | Longitude |
|-------|-------|------------|-----------------------|--------------------|-------------|
| 0.0 | 0.0 | 1529015.90 | 2344592.59 | 39.262953 | -107.815075 |

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)

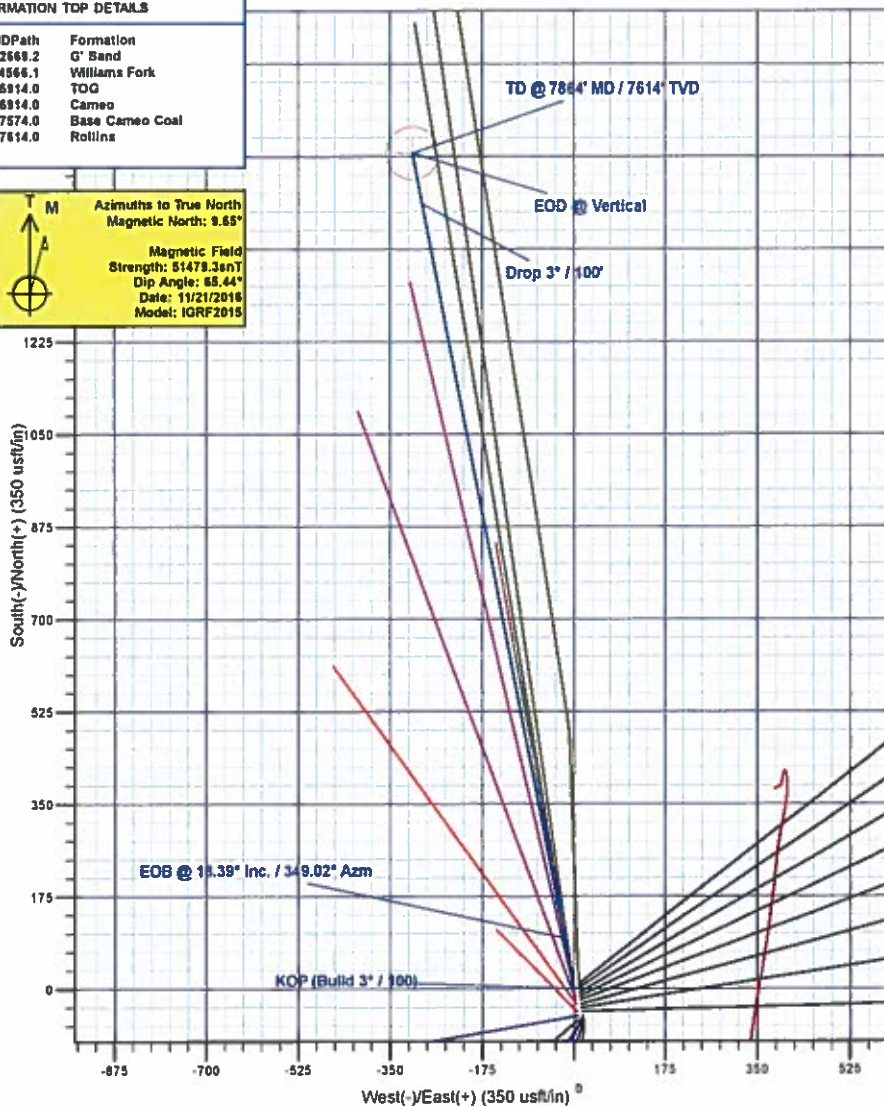
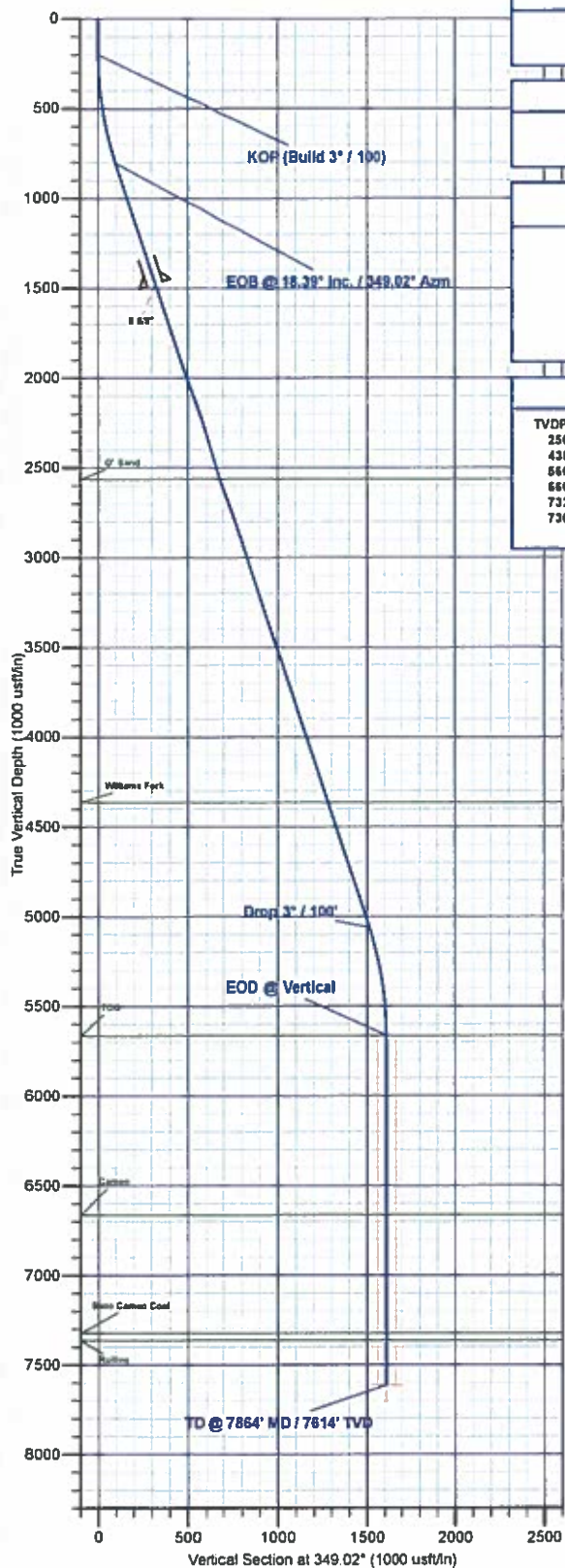
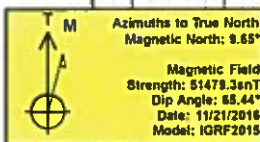
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|----------------------|--------|--------|--------|------------|------------|-----------|-------------|
| PBHL - Bruton 19-04W | 7614.0 | 1581.2 | -306.9 | 1530604.38 | 2344328.08 | 39.267294 | -107.816189 |

SECTION DETAILS

| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
|--------|-------|--------|--------|--------|--------|------|--------|--------|---------------------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | KOP (Build 3° / 100') |
| 812.9 | 18.39 | 349.02 | 802.4 | 95.7 | -18.6 | 3.00 | 349.02 | 97.5 | EOB @ 18.39° Inc. / 349.02° Azm |
| 5301.2 | 18.39 | 349.02 | 5081.5 | 1485.5 | -288.3 | 0.00 | 0.00 | 1513.2 | Drop 3° / 100' |
| 5914.0 | 0.00 | 0.00 | 5664.0 | 1581.2 | -306.9 | 3.00 | 180.00 | 1610.7 | EOD @ Vertical |
| 7864.0 | 0.00 | 0.00 | 7614.0 | 1581.2 | -306.9 | 0.00 | 0.00 | 1610.7 | TD @ 7864' MD / 7614' TVD |

FORMATION TOP DETAILS

| TVDPATH | MDPATH | Formation |
|---------|--------|-----------------|
| 2564.0 | 2669.2 | G' Sand |
| 4364.0 | 4566.1 | Williams Fork |
| 5664.0 | 5814.0 | TOG |
| 6664.0 | 6814.0 | Cameo |
| 7324.0 | 7574.0 | Base Cameo Coal |
| 7364.0 | 7614.0 | Rollins |



Plan: Design #2 (Bruton 19-04W/Wellbore #1)

Created By: Will Jircik Date: 10:25, March 01 2017



Laramie Energy, LLC

Mesa County, CO

Bruton 19-06 Pad

Bruton 19-04W

Wellbore #1

Plan: Design #2

QES Well Planning Report

01 March, 2017





Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Bruton 19-04W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7286.0usft (H&P #290) |
| Project: | Mesa County, CO | MD Reference: | well @ 7286.0usft (H&P #290) |
| Site: | Bruton 19-06 Pad | North Reference: | True |
| Well: | Bruton 19-04W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #2 | | |

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

| | | | | |
|------------------------------|------------------|---------------------|-------------------|----------------------------------|
| Site | Bruton 19-06 Pad | | | |
| Site Position: | | Northing: | 1,528,940.55 usft | Latitude: 39.262756 |
| From: | Lat/Long | Easting: | 2,344,737.10 usft | Longitude: -107.814558 |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " | Grid Convergence: -1.46 " |

| | | | | |
|-----------------------------|---------------|----------------------------|------------------|-----------------------------------|
| Well | Bruton 19-04W | | | |
| Well Position | +N/-S | 71.7 usft | Northing: | 1,529,015.91 usft |
| | +E/-W | -146.4 usft | Easting: | 2,344,592.59 usft |
| Position Uncertainty | 0.0 usft | Wellhead Elevation: | 0.0 usft | Ground Level: 7,262.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination | Dip Angle | Field Strength |
| | | | (°) | (°) | (nT) |
| | IGRF2015 | 11/21/2016 | 9.65 | 65.44 | 51,479 |

| | | | | |
|--------------------------|-------------------------|--------------|----------------------|------------------|
| Design | Design #2 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) | +N/-S | +E/-W | Direction |
| | (usft) | (usft) | (usft) | (°) |
| | 0.0 | 0.0 | 0.0 | 349.02 |

| | | | | | | | | | | |
|----------------------|--------------------|----------------|-----------------|--------------|--------------|---------------|--------------|-------------|------------|----------------------|
| Plan Sections | | | | | | | | | | |
| Measured | Inclination | Azimuth | Vertical | +N/-S | +E/-W | Dogleg | Build | Turn | TFO | Target |
| Depth | (°) | (°) | Depth | (usft) | (usft) | Rate | Rate | Rate | (°) | |
| (usft) | | | (usft) | | | (°/100usft) | (°/100usft) | (°/100usft) | | |
| 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 | |
| 812.9 | 18.39 | 349.02 | 802.4 | 95.7 | -18.6 | 3.00 | 3.00 | 0.00 | 349.02 | |
| 5,301.2 | 18.39 | 349.02 | 5,061.6 | 1,485.5 | -288.3 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,914.0 | 0.00 | 0.00 | 5,664.0 | 1,581.2 | -306.9 | 3.00 | -3.00 | 0.00 | 180.00 | |
| 7,864.0 | 0.00 | 0.00 | 7,614.0 | 1,581.2 | -306.9 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL - Bruton 19-04W |



Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Bruton 19-04W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7286.0usft (H&P #290) |
| Project: | Mesa County, CO | MD Reference: | well @ 7286.0usft (H&P #290) |
| Site: | Bruton 19-06 Pad | North Reference: | True |
| Well: | Bruton 19-04WV | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #2 | | |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 100.0 | 0.00 | 0.00 | 100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP (Build 3° / 100) | | | | | | | | | |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 3.00 | 349.02 | 300.0 | 2.6 | -0.5 | 2.6 | 3.00 | 3.00 | 0.00 |
| 400.0 | 6.00 | 349.02 | 399.6 | 10.3 | -2.0 | 10.5 | 3.00 | 3.00 | 0.00 |
| 500.0 | 9.00 | 349.02 | 498.8 | 23.1 | -4.5 | 23.5 | 3.00 | 3.00 | 0.00 |
| 600.0 | 12.00 | 349.02 | 597.1 | 41.0 | -8.0 | 41.7 | 3.00 | 3.00 | 0.00 |
| 700.0 | 15.00 | 349.02 | 694.3 | 63.9 | -12.4 | 65.1 | 3.00 | 3.00 | 0.00 |
| 800.0 | 18.00 | 349.02 | 790.2 | 91.8 | -17.8 | 93.5 | 3.00 | 3.00 | 0.00 |
| EOB @ 18.39° Inc. / 349.02° Azm | | | | | | | | | |
| 812.9 | 18.39 | 349.02 | 802.4 | 95.7 | -18.6 | 97.5 | 2.99 | 2.99 | 0.00 |
| 900.0 | 18.39 | 349.02 | 885.1 | 122.7 | -23.8 | 125.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 18.39 | 349.02 | 980.0 | 153.6 | -29.8 | 156.5 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 18.39 | 349.02 | 1,074.9 | 184.6 | -35.8 | 188.1 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 18.39 | 349.02 | 1,169.8 | 215.6 | -41.8 | 219.6 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 18.39 | 349.02 | 1,264.7 | 246.5 | -47.9 | 251.1 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 18.39 | 349.02 | 1,359.6 | 277.5 | -53.9 | 282.7 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 18.39 | 349.02 | 1,454.5 | 308.5 | -59.9 | 314.2 | 0.00 | 0.00 | 0.00 |
| 8 5/8" | | | | | | | | | |
| 1,524.0 | 18.39 | 349.02 | 1,477.2 | 315.9 | -61.3 | 321.8 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 18.39 | 349.02 | 1,549.4 | 339.4 | -65.9 | 345.8 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 18.39 | 349.02 | 1,644.3 | 370.4 | -71.9 | 377.3 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 18.39 | 349.02 | 1,739.1 | 401.4 | -77.9 | 408.9 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 18.39 | 349.02 | 1,834.0 | 432.3 | -83.9 | 440.4 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 18.39 | 349.02 | 1,928.9 | 463.3 | -89.9 | 471.9 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 18.39 | 349.02 | 2,023.8 | 494.3 | -95.9 | 503.5 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 18.39 | 349.02 | 2,118.7 | 525.2 | -101.9 | 535.0 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 18.39 | 349.02 | 2,213.6 | 556.2 | -108.0 | 566.6 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 18.39 | 349.02 | 2,308.5 | 587.1 | -114.0 | 598.1 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 18.39 | 349.02 | 2,403.4 | 618.1 | -120.0 | 629.6 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 18.39 | 349.02 | 2,498.3 | 649.1 | -126.0 | 661.2 | 0.00 | 0.00 | 0.00 |
| G' Sand | | | | | | | | | |
| 2,669.2 | 18.39 | 349.02 | 2,564.0 | 670.5 | -130.1 | 683.0 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 18.39 | 349.02 | 2,593.2 | 680.0 | -132.0 | 692.7 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 18.39 | 349.02 | 2,688.1 | 711.0 | -138.0 | 724.3 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 18.39 | 349.02 | 2,783.0 | 742.0 | -144.0 | 755.8 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 18.39 | 349.02 | 2,877.9 | 772.9 | -150.0 | 787.4 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 18.39 | 349.02 | 2,972.8 | 803.9 | -156.0 | 818.9 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 18.39 | 349.02 | 3,067.7 | 834.9 | -162.0 | 850.4 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 18.39 | 349.02 | 3,162.6 | 865.8 | -168.1 | 882.0 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 18.39 | 349.02 | 3,257.5 | 896.8 | -174.1 | 913.5 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 18.39 | 349.02 | 3,352.4 | 927.7 | -180.1 | 945.1 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 18.39 | 349.02 | 3,447.3 | 958.7 | -186.1 | 976.6 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 18.39 | 349.02 | 3,542.2 | 989.7 | -192.1 | 1,008.1 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 18.39 | 349.02 | 3,637.1 | 1,020.6 | -198.1 | 1,039.7 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 18.39 | 349.02 | 3,731.9 | 1,051.6 | -204.1 | 1,071.2 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 18.39 | 349.02 | 3,826.8 | 1,082.6 | -210.1 | 1,102.8 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 18.39 | 349.02 | 3,921.7 | 1,113.5 | -216.1 | 1,134.3 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 18.39 | 349.02 | 4,016.6 | 1,144.5 | -222.1 | 1,165.9 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 18.39 | 349.02 | 4,111.5 | 1,175.5 | -228.2 | 1,197.4 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 18.39 | 349.02 | 4,206.4 | 1,206.4 | -234.2 | 1,228.9 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 18.39 | 349.02 | 4,301.3 | 1,237.4 | -240.2 | 1,260.5 | 0.00 | 0.00 | 0.00 |
| Williams Fork | | | | | | | | | |



Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Bruton 19-04W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7286 0usft (H&P #290) |
| Project: | Mesa County, CO | MD Reference: | well @ 7286 0usft (H&P #290) |
| Site: | Bruton 19-06 Pad | North Reference: | True |
| Well: | Bruton 19-04W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #2 | | |

Planned Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|---------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,566.1 | 18.39 | 349.02 | 4,364.0 | 1,257.8 | -244.1 | 1,281.3 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 18.39 | 349.02 | 4,396.2 | 1,268.3 | -246.2 | 1,292.0 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 18.39 | 349.02 | 4,491.1 | 1,299.3 | -252.2 | 1,323.6 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 18.39 | 349.02 | 4,586.0 | 1,330.3 | -258.2 | 1,355.1 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 18.39 | 349.02 | 4,680.9 | 1,361.2 | -264.2 | 1,386.6 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 18.39 | 349.02 | 4,775.8 | 1,392.2 | -270.2 | 1,418.2 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 18.39 | 349.02 | 4,870.7 | 1,423.2 | -276.2 | 1,449.7 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 18.39 | 349.02 | 4,965.6 | 1,454.1 | -282.2 | 1,481.3 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 18.39 | 349.02 | 5,060.5 | 1,485.1 | -288.3 | 1,512.8 | 0.00 | 0.00 | 0.00 |
| Drop 3° / 100' | | | | | | | | | |
| 5,301.2 | 18.39 | 349.02 | 5,061.6 | 1,485.5 | -288.3 | 1,513.2 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 15.42 | 349.02 | 5,156.1 | 1,513.7 | -293.8 | 1,541.9 | 3.00 | -3.00 | 0.00 |
| 5,500.0 | 12.42 | 349.02 | 5,253.2 | 1,537.3 | -298.4 | 1,566.0 | 3.00 | -3.00 | 0.00 |
| 5,600.0 | 9.42 | 349.02 | 5,351.4 | 1,555.9 | -302.0 | 1,584.9 | 3.00 | -3.00 | 0.00 |
| 5,700.0 | 6.42 | 349.02 | 5,450.4 | 1,569.4 | -304.6 | 1,598.7 | 3.00 | -3.00 | 0.00 |
| 5,800.0 | 3.42 | 349.02 | 5,550.0 | 1,577.8 | -306.3 | 1,607.3 | 3.00 | -3.00 | 0.00 |
| 5,900.0 | 0.42 | 349.02 | 5,650.0 | 1,581.1 | -306.9 | 1,610.6 | 3.00 | -3.00 | 0.00 |
| EOD @ Vertical - TOG | | | | | | | | | |
| 5,914.0 | 0.00 | 0.00 | 5,664.0 | 1,581.2 | -306.9 | 1,610.7 | 3.00 | -3.00 | 78.22 |
| 6,000.0 | 0.00 | 0.00 | 5,750.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 0.00 | 0.00 | 5,850.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 0.00 | 0.00 | 5,950.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 0.00 | 0.00 | 6,050.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 0.00 | 0.00 | 6,150.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 0.00 | 0.00 | 6,250.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 0.00 | 0.00 | 6,350.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 0.00 | 0.00 | 6,450.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 0.00 | 0.00 | 6,550.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 0.00 | 0.00 | 6,650.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| Cameo | | | | | | | | | |
| 6,914.0 | 0.00 | 0.00 | 6,664.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 0.00 | 0.00 | 6,750.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 0.00 | 0.00 | 6,850.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 0.00 | 0.00 | 6,950.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 0.00 | 0.00 | 7,050.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.00 | 0.00 | 7,150.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 0.00 | 0.00 | 7,250.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| Base Cameo Coal | | | | | | | | | |
| 7,574.0 | 0.00 | 0.00 | 7,324.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 0.00 | 0.00 | 7,350.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| Rollins | | | | | | | | | |
| 7,614.0 | 0.00 | 0.00 | 7,364.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 0.00 | 0.00 | 7,450.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 0.00 | 0.00 | 7,550.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |
| TD @ 7864' MD / 7614' TVD | | | | | | | | | |
| 7,864.0 | 0.00 | 0.00 | 7,614.0 | 1,581.2 | -306.9 | 1,610.7 | 0.00 | 0.00 | 0.00 |



Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Bruton 19-04W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7286.0usft (H&P #290) |
| Project: | Mesa County, CO | MD Reference: | well @ 7286.0usft (H&P #290) |
| Site: | Bruton 19-06 Pad | North Reference: | True |
| Well: | Bruton 19-04W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #2 | | |

Design Targets

| Target Name - hit/miss target - Shape | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------|-------------|
| PBHL - Bruton 19-04W - plan hits target center - Circle (radius 50.0) | 0.00 | 0.00 | 7,614.0 | 1,581.2 | -306.9 | 1,530,604.38 | 2,344,326.08 | 39.267294 | -107.816159 |

Casing Points

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|-----------------------------|-----------------------------|--------|---------------------------|-------------------------|
| 1,524.0 | 1,477.2 | 8 5/8" | 8-5/8 | 11 |

Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------------|-----------------------------|-----------------|-----------|------------|-------------------------|
| 2,669.2 | 2,564.0 | G' Sand | | | |
| 4,566.1 | 4,364.0 | Williams Fork | | | |
| 5,914.0 | 5,664.0 | TOG | | | |
| 6,914.0 | 6,664.0 | Cameo | | | |
| 7,574.0 | 7,324.0 | Base Cameo Coal | | | |
| 7,614.0 | 7,364.0 | Rollins | | | |

Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------------|-----------------------------|-------------------|-----------------|---------------------------------|
| | | +N/-S (usft) | +E/-W (usft) | |
| 200.0 | 200.0 | 0.0 | 0.0 | KOP (Build 3" / 100) |
| 812.9 | 802.4 | 95.7 | -18.6 | EOB @ 18.39° Inc. / 349.02° Azm |
| 5,301.2 | 5,061.6 | 1,485.5 | -288.3 | Drop 3" / 100' |
| 5,914.0 | 5,664.0 | 1,581.2 | -306.9 | EOD @ Vertical |
| 7,864.0 | 7,614.0 | 1,581.2 | -306.9 | TD @ 7864' MD / 7614' TVD |