



Project: Mesa County, CO
 Site: Bruton 30-03 Pad
 Well: Bruton 30-12W
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.252553
 Longitude: -107.814342
 Ground Level: 7512.0
 well @ 7534.0usft (H&P #290)

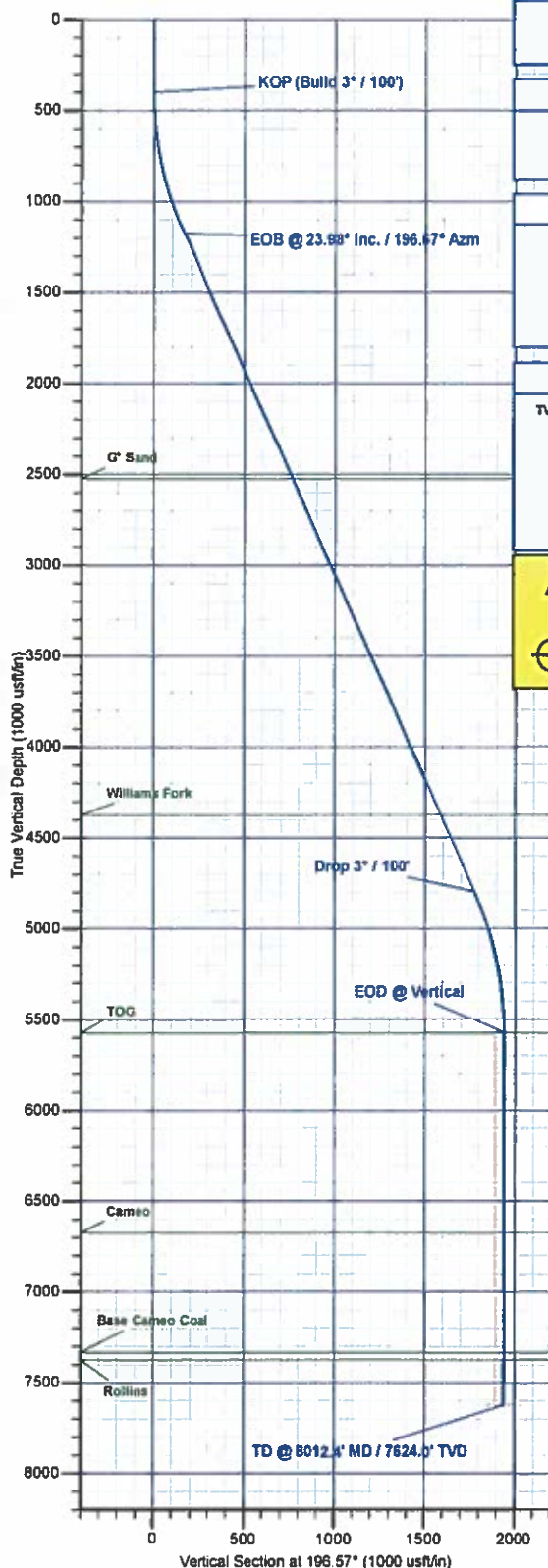


PROJECT DETAILS: Mesa County, CO

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 (NE) Reference: Well Bruton 30-12W, True North
 Vertical (TVD) Reference: well @ 7534.0usft (H&P #290)
 Section (VS) Reference: Slot - (0.0N, 0.0E)
 Measured Depth Reference: well @ 7534.0usft (H&P #290)
 Calculation Method: Minimum Curvature

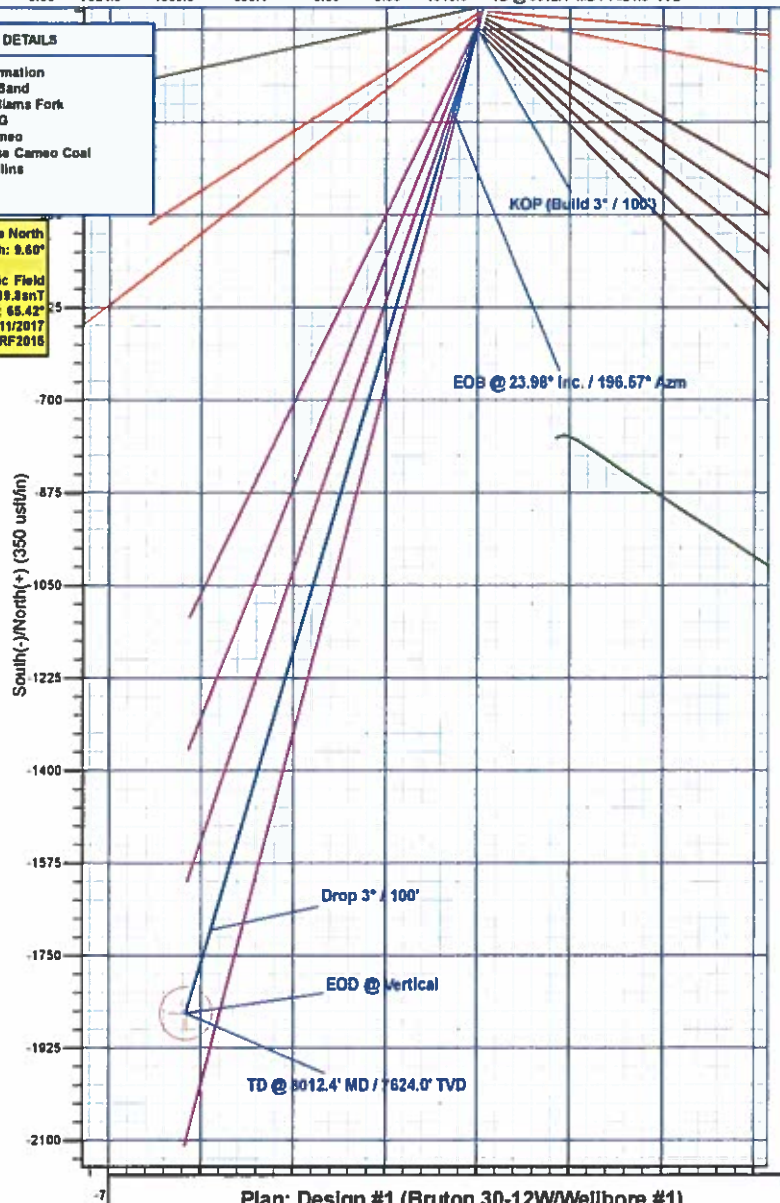
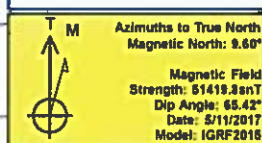


| WELL DETAILS: Bruton 30-12W | | | | | | |
|-----------------------------|------|----------------------|------------|-----------|-------------|--|
| | | Ground Level: 7512.0 | | | | |
| +N-S | +E-W | Northing | Easting | Latitude | Longitude | |
| 0.0 | 0.0 | 1625224.07 | 2344703.58 | 39.252553 | -107.814342 | |

| DESIGN TARGET DETAILS | | | | | | |
|-----------------------|--------|---------|--------|------------|------------|-----------|
| Name | TVD | +N-S | +E-W | Northing | Easting | Latitude |
| PBHL - Bruton 30-12W | 7624.0 | -1860.0 | -553.4 | 1523378.73 | 2344103.01 | 39.247446 |

| SECTION DETAILS | | | | | | | | | |
|-----------------|-------|--------|--------|---------|--------|------|--------|--------|---------------------------------|
| MD | Inc | Azi | TVD | +N-S | +E-W | Diag | TFace | VFace | Annotation |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | KOP (Build 3° / 100') |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | EOB @ 23.98° Inc. / 196.57° Azm |
| 1199.3 | 23.98 | 196.57 | 1178.2 | -156.0 | -47.0 | 3.00 | 196.57 | 164.8 | Drop 3° / 100' |
| 5163.1 | 23.98 | 196.57 | 4797.8 | -1702.0 | -806.4 | 0.00 | 0.00 | 1775.8 | EOD @ Vertical |
| 5962.4 | 0.00 | 0.00 | 5574.0 | -1860.0 | -553.4 | 3.00 | 180.00 | 1940.8 | TD @ 8012.4' MD / 7624.0' TVD |
| 8012.4 | 0.00 | 0.00 | 7624.0 | -1860.0 | -553.4 | 0.00 | 0.00 | 1940.8 | |

| FORMATION TOP DETAILS | | |
|-----------------------|--------|-----------------|
| TVDPath | MDPath | Formation |
| 2524.0 | 2674.5 | G' Sand |
| 4374.0 | 4699.2 | Williams Fork |
| 5574.0 | 5962.4 | TOG |
| 5674.0 | 7062.4 | Cameo |
| 7334.0 | 7722.4 | Base Cameo Coal |
| 7374.0 | 7782.4 | Rollins |



Plan: Design #1 (Bruton 30-12W/Wellbore #1)

Created By: Will Jircik Date: 13:03, May 15 2017



Laramie Energy, LLC

Mesa County, CO

Bruton 30-03 Pad

Bruton 30-12W

Wellbore #1

Plan: Design #1

QES Well Planning Report

15 May, 2017





Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Bruton 30-12W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7534.0usft (H&P #280) |
| Project: | Mesa County, CO | MD Reference: | well @ 7534.0usft (H&P #290) |
| Site: | Bruton 30-03 Pad | North Reference: | True |
| Well: | Bruton 30-12W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 | | |

| | | | |
|--------------------|---------------------------|----------------------|----------------|
| 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 30-03 Pad | | | |
| Site Position: | | Northing: | 1,525,281.27 usft | Latitude: 39.252711 |
| From: | Lat/Long | Easting: | 2,344,720.08 usft | Longitude: -107.814289 |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " | Grid Convergence: -1.46 " |

| | | | | |
|-----------------------------|---------------|----------------------------|------------------|-----------------------------------|
| Well | Bruton 30-12W | | | |
| Well Position | +N-S | -57.6 usft | Northing: | 1,525,224.07 usft |
| | +E-W | -15.0 usft | Easting: | 2,344,703.58 usft |
| Position Uncertainty | 0.0 usft | Wellhead Elevation: | 0.0 usft | Ground Level: 7,512.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 5/11/2017 | 9.60 | 65.42 | 51,420 |

| | | | | |
|--------------------------|------------------------------------|------------------------|------------------------|--------------------------|
| Design | Design #1 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N-S (usft) | +E-W (usft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 196.57 |

| Plan Sections | | | | | | | | | | |
|-----------------------------|--------------------|----------------|-----------------------------|----------------|----------------|-------------------------------|------------------------------|-----------------------------|------------|----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N-S (usft) | +E-W (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | TFO (°) | Target |
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,199.3 | 23.98 | 196.57 | 1,176.2 | -158.0 | -47.0 | 3.00 | 3.00 | 0.00 | 196.57 | |
| 5,163.1 | 23.98 | 196.57 | 4,797.8 | -1,702.0 | -506.4 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,962.4 | 0.00 | 0.00 | 5,574.0 | -1,860.0 | -553.4 | 3.00 | -3.00 | 0.00 | 180.00 | |
| 8,012.4 | 0.00 | 0.00 | 7,624.0 | -1,860.0 | -553.4 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL - Bruton 30-12W |



Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDMS002 | Local Co-ordinate Reference: | Well Bruton 30-12W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7534.0usft (H&P #290) |
| Project: | Mesa County, CO | MD Reference: | well @ 7534.0usft (H&P #290) |
| Site: | Bruton 30-03 Pad | North Reference: | True |
| Well: | Bruton 30-12W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 | | |

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 |
| 200.0 | 0.00 | 0.00 | 200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP (Build 3° / 100') | | | | | | | | | |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 500.0 | 3.00 | 196.57 | 500.0 | -2.5 | -0.7 | 2.6 | 3.00 | 3.00 | 0.00 |
| 600.0 | 6.00 | 196.57 | 599.6 | -10.0 | -3.0 | 10.5 | 3.00 | 3.00 | 0.00 |
| 700.0 | 9.00 | 196.57 | 698.8 | -22.5 | -6.7 | 23.5 | 3.00 | 3.00 | 0.00 |
| 800.0 | 12.00 | 196.57 | 797.1 | -40.0 | -11.9 | 41.7 | 3.00 | 3.00 | 0.00 |
| 900.0 | 15.00 | 196.57 | 894.3 | -62.4 | -18.6 | 65.1 | 3.00 | 3.00 | 0.00 |
| 1,000.0 | 18.00 | 196.57 | 990.2 | -89.6 | -26.7 | 93.5 | 3.00 | 3.00 | 0.00 |
| 1,100.0 | 21.00 | 196.57 | 1,084.4 | -121.6 | -36.2 | 126.9 | 3.00 | 3.00 | 0.00 |
| EOB @ 23.98° Inc. / 196.57° Azm | | | | | | | | | |
| 1,199.3 | 23.98 | 196.57 | 1,176.2 | -158.0 | -47.0 | 164.8 | 3.00 | 3.00 | 0.00 |
| 1,200.0 | 23.98 | 196.57 | 1,176.8 | -158.3 | -47.1 | 165.1 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 23.98 | 196.57 | 1,268.2 | -197.2 | -58.7 | 205.8 | 0.00 | 0.00 | 0.00 |
| 1,400.0 | 23.98 | 196.57 | 1,359.5 | -236.2 | -70.3 | 246.4 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 23.98 | 196.57 | 1,450.9 | -275.1 | -81.9 | 287.0 | 0.00 | 0.00 | 0.00 |
| 8 5/8" | | | | | | | | | |
| 1,522.0 | 23.98 | 196.57 | 1,471.0 | -283.7 | -84.4 | 296.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 23.98 | 196.57 | 1,542.3 | -314.1 | -93.4 | 327.7 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 23.98 | 196.57 | 1,633.7 | -353.0 | -105.0 | 368.3 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 23.98 | 196.57 | 1,725.0 | -392.0 | -116.6 | 409.0 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 23.98 | 196.57 | 1,816.4 | -430.9 | -128.2 | 449.6 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 23.98 | 196.57 | 1,907.8 | -469.9 | -139.8 | 490.2 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 23.98 | 196.57 | 1,999.1 | -508.8 | -151.4 | 530.9 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 23.98 | 196.57 | 2,090.5 | -547.8 | -163.0 | 571.5 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 23.98 | 196.57 | 2,181.9 | -586.8 | -174.6 | 612.2 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 23.98 | 196.57 | 2,273.2 | -625.7 | -186.2 | 652.8 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 23.98 | 196.57 | 2,364.6 | -664.7 | -197.7 | 693.5 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 23.98 | 196.57 | 2,456.0 | -703.6 | -209.3 | 734.1 | 0.00 | 0.00 | 0.00 |
| G' Sand | | | | | | | | | |
| 2,674.5 | 23.98 | 196.57 | 2,524.0 | -732.6 | -218.0 | 764.4 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 23.98 | 196.57 | 2,547.3 | -742.6 | -220.9 | 774.7 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 23.98 | 196.57 | 2,638.7 | -781.5 | -232.5 | 815.4 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 23.98 | 196.57 | 2,730.1 | -820.5 | -244.1 | 856.0 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 23.98 | 196.57 | 2,821.4 | -859.4 | -255.7 | 896.7 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 23.98 | 196.57 | 2,912.8 | -898.4 | -267.3 | 937.3 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 23.98 | 196.57 | 3,004.2 | -937.3 | -278.9 | 977.9 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 23.98 | 196.57 | 3,095.6 | -976.3 | -290.5 | 1,018.6 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 23.98 | 196.57 | 3,186.9 | -1,015.3 | -302.0 | 1,059.2 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 23.98 | 196.57 | 3,278.3 | -1,054.2 | -313.6 | 1,099.9 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 23.98 | 196.57 | 3,369.7 | -1,093.2 | -325.2 | 1,140.5 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 23.98 | 196.57 | 3,461.0 | -1,132.1 | -336.8 | 1,181.2 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 23.98 | 196.57 | 3,552.4 | -1,171.1 | -348.4 | 1,221.8 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 23.98 | 196.57 | 3,643.8 | -1,210.0 | -360.0 | 1,262.4 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 23.98 | 196.57 | 3,735.1 | -1,249.0 | -371.6 | 1,303.1 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 23.98 | 196.57 | 3,826.5 | -1,287.9 | -383.2 | 1,343.7 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 23.98 | 196.57 | 3,917.9 | -1,326.9 | -394.8 | 1,384.4 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 23.98 | 196.57 | 4,009.2 | -1,365.8 | -406.3 | 1,425.0 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 23.98 | 196.57 | 4,100.6 | -1,404.8 | -417.9 | 1,465.6 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 23.98 | 196.57 | 4,192.0 | -1,443.8 | -429.5 | 1,506.3 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 23.98 | 196.57 | 4,283.3 | -1,482.7 | -441.1 | 1,546.9 | 0.00 | 0.00 | 0.00 |



Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Bruton 30-12W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7534.0usft (H&P #290) |
| Project: | Mesa County, CO | MD Reference: | well @ 7534.0usft (H&P #290) |
| Site: | Bruton 30-03 Pad | North Reference: | True |
| Well: | Bruton 30-12W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 | | |

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) |
|--------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Williams Fork | | | | | | | | | |
| 4,699.2 | 23.98 | 196.57 | 4,374.0 | -1,521.4 | -452.6 | 1,587.3 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 23.98 | 196.57 | 4,374.7 | -1,521.7 | -452.7 | 1,587.6 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 23.98 | 196.57 | 4,466.1 | -1,560.6 | -464.3 | 1,628.2 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 23.98 | 196.57 | 4,557.5 | -1,599.6 | -475.9 | 1,668.9 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 23.98 | 196.57 | 4,648.8 | -1,638.5 | -487.5 | 1,709.5 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 23.98 | 196.57 | 4,740.2 | -1,677.5 | -499.1 | 1,750.1 | 0.00 | 0.00 | 0.00 |
| Drop 3° / 100' | | | | | | | | | |
| 5,183.1 | 23.98 | 196.57 | 4,797.8 | -1,702.0 | -506.4 | 1,775.8 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 22.87 | 196.57 | 4,831.7 | -1,716.1 | -510.6 | 1,790.5 | 3.00 | -3.00 | 0.00 |
| 5,300.0 | 19.87 | 196.57 | 4,924.8 | -1,751.0 | -520.9 | 1,826.9 | 3.00 | -3.00 | 0.00 |
| 5,400.0 | 16.87 | 196.57 | 5,019.7 | -1,781.2 | -529.9 | 1,858.4 | 3.00 | -3.00 | 0.00 |
| 5,500.0 | 13.87 | 196.57 | 5,116.1 | -1,806.7 | -537.5 | 1,884.9 | 3.00 | -3.00 | 0.00 |
| 5,600.0 | 10.87 | 196.57 | 5,213.8 | -1,827.2 | -543.6 | 1,906.3 | 3.00 | -3.00 | 0.00 |
| 5,700.0 | 7.87 | 196.57 | 5,312.4 | -1,842.8 | -548.2 | 1,922.6 | 3.00 | -3.00 | 0.00 |
| 5,800.0 | 4.87 | 196.57 | 5,411.8 | -1,853.4 | -551.4 | 1,933.7 | 3.00 | -3.00 | 0.00 |
| 5,900.0 | 1.87 | 196.57 | 5,511.6 | -1,859.1 | -553.1 | 1,939.6 | 3.00 | -3.00 | 0.00 |
| EOD @ Vertical - TOG | | | | | | | | | |
| 5,962.4 | 0.00 | 0.00 | 5,574.0 | -1,860.0 | -553.4 | 1,940.6 | 3.00 | -3.00 | 261.99 |
| 6,000.0 | 0.00 | 0.00 | 5,611.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 0.00 | 0.00 | 5,711.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 0.00 | 0.00 | 5,811.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 0.00 | 0.00 | 5,911.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 0.00 | 0.00 | 6,011.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 0.00 | 0.00 | 6,111.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 0.00 | 0.00 | 6,211.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 0.00 | 0.00 | 6,311.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 0.00 | 0.00 | 6,411.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 0.00 | 0.00 | 6,511.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 0.00 | 0.00 | 6,611.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| Cameo | | | | | | | | | |
| 7,062.4 | 0.00 | 0.00 | 6,674.0 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 0.00 | 0.00 | 6,711.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 0.00 | 0.00 | 6,811.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 0.00 | 0.00 | 6,911.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.00 | 0.00 | 7,011.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 0.00 | 0.00 | 7,111.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 0.00 | 0.00 | 7,211.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 0.00 | 0.00 | 7,311.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| Base Cameo Coal | | | | | | | | | |
| 7,722.4 | 0.00 | 0.00 | 7,334.0 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| Rollins | | | | | | | | | |
| 7,762.4 | 0.00 | 0.00 | 7,374.0 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 0.00 | 0.00 | 7,411.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 0.00 | 0.00 | 7,511.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 0.00 | 0.00 | 7,611.6 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |
| TD @ 8012.4' MD / 7624.0' TVD | | | | | | | | | |
| 8,012.4 | 0.00 | 0.00 | 7,624.0 | -1,860.0 | -553.4 | 1,940.6 | 0.00 | 0.00 | 0.00 |



Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Bruton 30-12W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7534.0usft (H&P #290) |
| Project: | Mesa County, CO | MD Reference: | well @ 7534.0usft (H&P #290) |
| Site: | Bruton 30-03 Pad | North Reference: | True |
| Well: | Bruton 30-12W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 | | |

Design Targets

Target Name

| - hit/miss target | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---------------------------|------------------|-----------------|---------------|-----------------|-----------------|--------------------|-------------------|-----------|-------------|
| - Shape | | | | | | | | | |
| PBHL - Bruton 30-12W | 0.00 | 0.00 | 7,624.0 | -1,860.0 | -553.4 | 1,523,378.73 | 2,344,103.01 | 39.247446 | -107.816296 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

Casing Points

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|-----------------------------|-----------------------------|--------|---------------------------|-------------------------|
| 1,522.0 | 1,471.0 | 8 5/8" | 8-5/8 | 11 |

Formations

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------------|-----------------------------|-----------------|-----------|------------|-------------------------|
| 2,674.5 | 2,524.0 | G' Sand | | | |
| 4,699.2 | 4,374.0 | Williams Fork | | | |
| 5,962.4 | 5,574.0 | TOG | | | |
| 7,062.4 | 6,674.0 | Cameo | | | |
| 7,722.4 | 7,334.0 | Base Cameo Coal | | | |
| 7,762.4 | 7,374.0 | Rollins | | | |

Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------------|-----------------------------|-------------------|-----------------|---------------------------------|
| | | +N/-S (usft) | +E/-W (usft) | |
| 400.0 | 400.0 | 0.0 | 0.0 | KOP (Build 3" / 100') |
| 1,199.3 | 1,176.2 | -158.0 | -47.0 | EOB @ 23.98° Inc. / 196.57° Azm |
| 5,163.1 | 4,797.8 | -1,702.0 | -506.4 | Drop 3" / 100' |
| 5,962.4 | 5,574.0 | -1,860.0 | -553.4 | EOD @ Vertical |
| 8,012.4 | 7,624.0 | -1,860.0 | -553.4 | TD @ 8012.4' MD / 7624.0' TVD |