



Project: Mesa County, CO
 Site: Nichols 24-06A
 Well: Nichols 0994-13-20W
 Wellbore: Wellbore #1
 Design: Design #1
 Latitude: 39.264728
 Longitude: -107.830561
 Ground Level: 7137.0
 well @ 7167.0usft (H&P #522)



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 Nichols 0994-13-20W, True North
 Vertical (TVD) Reference: well @ 7167.0usft (H&P #522)
 Section (VS) Reference: Slot - (0.0N, 0.0E)
 Measured Depth Reference: well @ 7167.0usft (H&P #522)
 Calculation Method: Minimum Curvature

WELL DETAILS:

Nichols 0994-13-20W

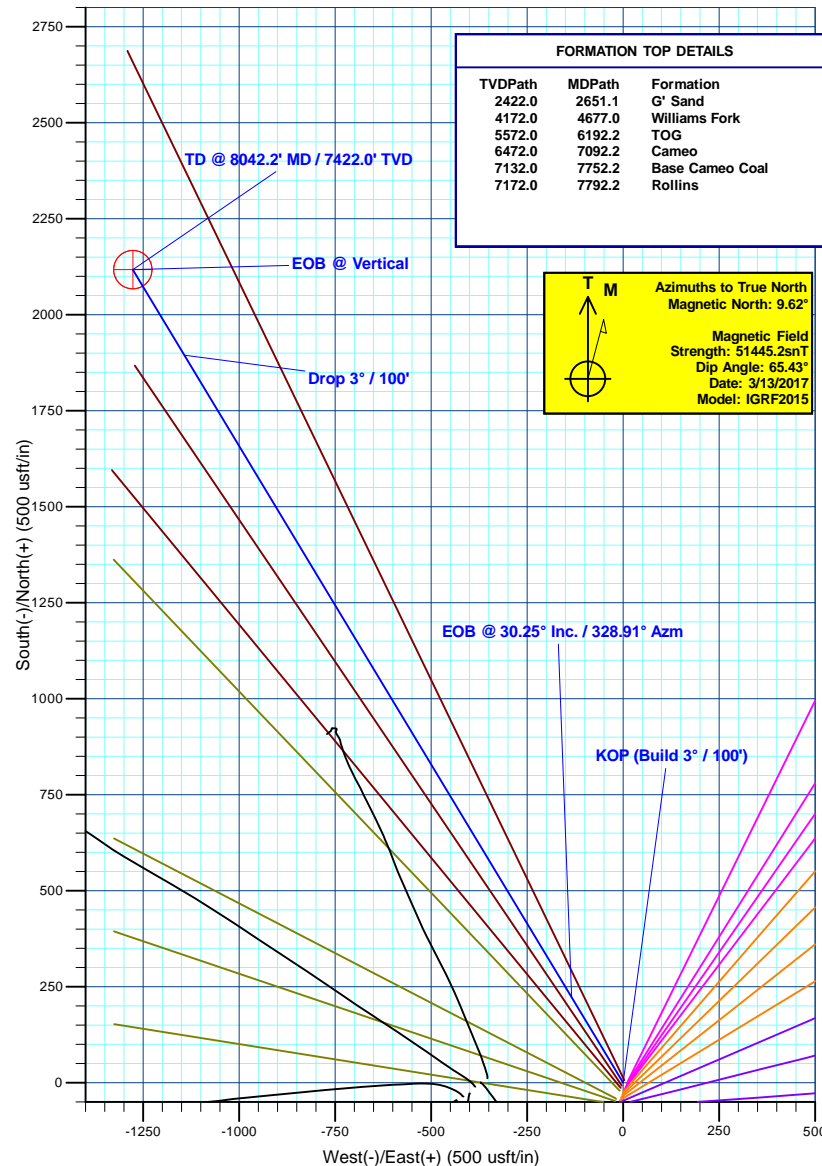
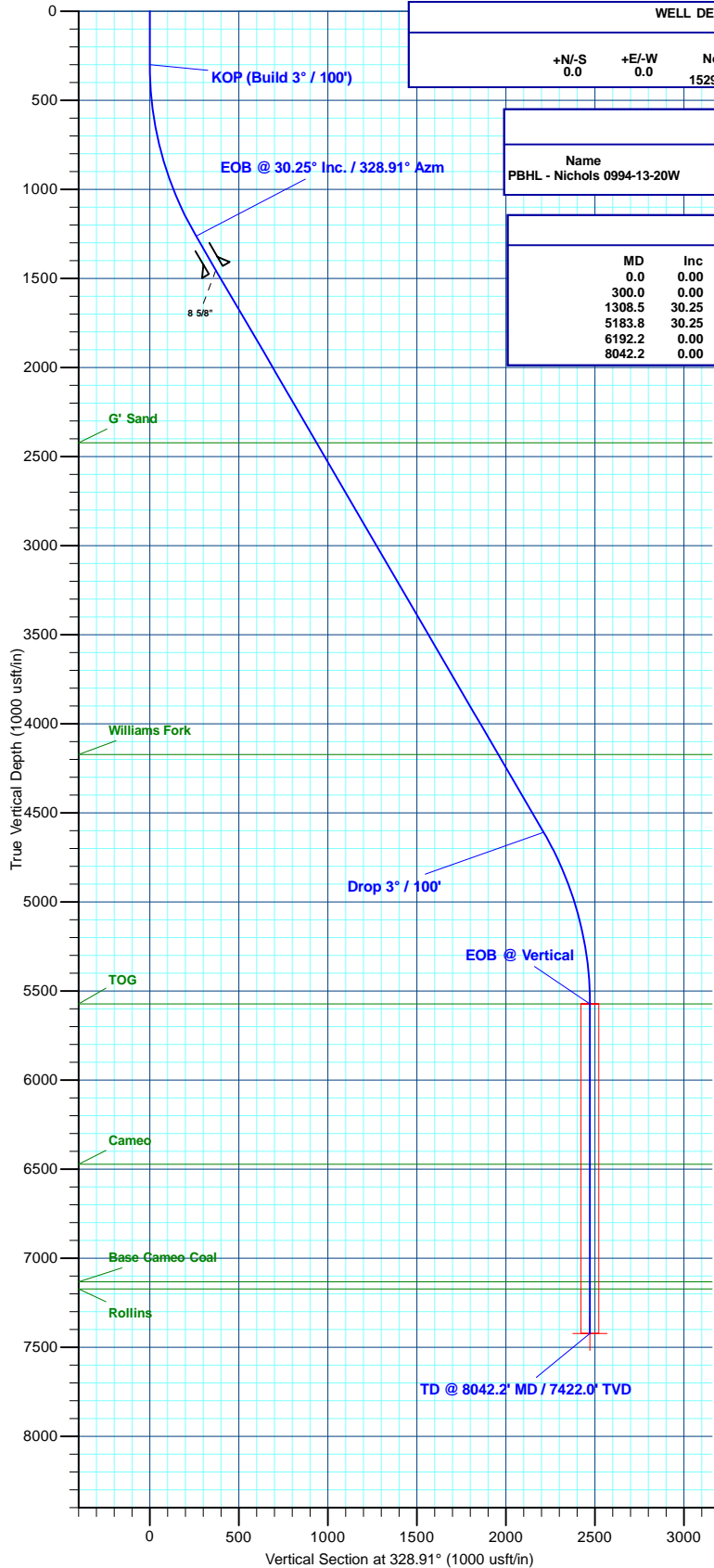
| +N/-S | +E/-W | Northing | Ground Level: Easting | 7137.0 Latitude | Longitude |
|-------|-------|------------|--------------------------|--------------------|-------------|
| 0.0 | 0.0 | 1529774.36 | 2340225.98 | 39.264728 | -107.830561 |

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

| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|----------------------------|--------|--------|---------|------------|------------|-----------|-------------|
| PBHL - Nichols 0994-13-20W | 7422.0 | 2117.6 | -1276.8 | 1531924.02 | 2339003.92 | 39.270542 | -107.835071 |

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 | |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | KOP (Build 3° / 100') |
| 1308.5 | 30.25 | 328.91 | 1262.2 | 222.8 | -134.3 | 3.00 | 328.91 | 260.1 | EOB @ 30.25° Inc. / 328.91° Azm |
| 5183.8 | 30.25 | 328.91 | 4609.8 | 1894.8 | -1142.5 | 0.00 | 0.00 | 2212.6 | Drop 3° / 100' |
| 6192.2 | 0.00 | 0.00 | 5572.0 | 2117.6 | -1276.8 | 3.00 | 180.00 | 2472.7 | EOB @ Vertical |
| 8042.2 | 0.00 | 0.00 | 7422.0 | 2117.6 | -1276.8 | 0.00 | 0.00 | 2472.7 | TD @ 8042.2' MD / 7422.0' TVD |



Plan: Design #1 (Nichols 0994-13-20W/Wellbore #1)

Created By: Will Jircik Date: 15:31, March 13 2017



Laramie Energy, LLC

Mesa County, CO

Nichols 24-06A

Nichols 0994-13-20W

Wellbore #1

Plan: Design #1

QES Well Planning Report

13 March, 2017





Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Nichols 0994-13-20W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7167.0usft (H&P #522) |
| Project: | Mesa County, CO | MD Reference: | well @ 7167.0usft (H&P #522) |
| Site: | Nichols 24-06A | North Reference: | True |
| Well: | Nichols 0994-13-20W | 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 | | Nichols 24-06A | | | |
| Site Position: | | Northing: | 1,529,702.08 usft | Latitude: | 39.264528 |
| From: | Lat/Long | Easting: | 2,340,203.74 usft | Longitude: | -107.830633 |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " | Grid Convergence: | -1.47 ° |

| | | | | | | |
|----------------------|---------------------|-----------|---------------------|-------------------|---------------|--------------|
| Well | Nichols 0994-13-20W | | | | | |
| Well Position | +N/-S | 72.8 usft | Northing: | 1,529,774.37 usft | Latitude: | 39.264728 |
| | +E/-W | 20.4 usft | Easting: | 2,340,225.99 usft | Longitude: | -107.830561 |
| Position Uncertainty | | 0.0 usft | Wellhead Elevation: | 0.0 usft | Ground Level: | 7,137.0 usft |

| | | | | | |
|-----------|-------------|-------------|-----------------|---------------|---------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 3/13/2017 | 9.62 | 65.43 | 51,445 |

| | | | | |
|-------------------|----------------------------|-----------------|-----------------|------------------|
| 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 | 328.91 |

| 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 | |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,308.5 | 30.25 | 328.91 | 1,262.2 | 222.8 | -134.3 | 3.00 | 3.00 | 0.00 | 328.91 | |
| 5,183.8 | 30.25 | 328.91 | 4,609.8 | 1,894.8 | -1,142.5 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,192.2 | 0.00 | 0.00 | 5,572.0 | 2,117.6 | -1,276.8 | 3.00 | -3.00 | 0.00 | 180.00 | |
| 8,042.2 | 0.00 | 0.00 | 7,422.0 | 2,117.6 | -1,276.8 | 0.00 | 0.00 | 0.00 | 0.00 | PBHL - Nichols 0994- |



Well Planning Report



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|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Nichols 0994-13-20W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7167.0usft (H&P #522) |
| Project: | Mesa County, CO | MD Reference: | well @ 7167.0usft (H&P #522) |
| Site: | Nichols 24-06A | North Reference: | True |
| Well: | Nichols 0994-13-20W | 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 |
| KOP (Build 3° / 100') | | | | | | | | | |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 3.00 | 328.91 | 400.0 | 2.2 | -1.4 | 2.6 | 3.00 | 3.00 | 0.00 |
| 500.0 | 6.00 | 328.91 | 499.6 | 9.0 | -5.4 | 10.5 | 3.00 | 3.00 | 0.00 |
| 600.0 | 9.00 | 328.91 | 598.8 | 20.1 | -12.1 | 23.5 | 3.00 | 3.00 | 0.00 |
| 700.0 | 12.00 | 328.91 | 697.1 | 35.7 | -21.5 | 41.7 | 3.00 | 3.00 | 0.00 |
| 800.0 | 15.00 | 328.91 | 794.3 | 55.7 | -33.6 | 65.1 | 3.00 | 3.00 | 0.00 |
| 900.0 | 18.00 | 328.91 | 890.2 | 80.1 | -48.3 | 93.5 | 3.00 | 3.00 | 0.00 |
| 1,000.0 | 21.00 | 328.91 | 984.4 | 108.6 | -65.5 | 126.9 | 3.00 | 3.00 | 0.00 |
| 1,100.0 | 24.00 | 328.91 | 1,076.8 | 141.4 | -85.3 | 165.1 | 3.00 | 3.00 | 0.00 |
| 1,200.0 | 27.00 | 328.91 | 1,167.1 | 178.3 | -107.5 | 208.2 | 3.00 | 3.00 | 0.00 |
| 1,300.0 | 30.00 | 328.91 | 1,254.9 | 219.1 | -132.1 | 255.9 | 3.00 | 3.00 | 0.00 |
| EOB @ 30.25° Inc. / 328.91° Azm | | | | | | | | | |
| 1,308.5 | 30.25 | 328.91 | 1,262.2 | 222.8 | -134.3 | 260.1 | 3.00 | 3.00 | 0.00 |
| 1,400.0 | 30.25 | 328.91 | 1,341.3 | 262.3 | -158.1 | 306.2 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 30.25 | 328.91 | 1,427.7 | 305.4 | -184.1 | 356.6 | 0.00 | 0.00 | 0.00 |
| 8 5/8" | | | | | | | | | |
| 1,530.0 | 30.25 | 328.91 | 1,453.6 | 318.3 | -191.9 | 371.7 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 30.25 | 328.91 | 1,514.1 | 348.6 | -210.2 | 407.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 30.25 | 328.91 | 1,600.5 | 391.7 | -236.2 | 457.4 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 30.25 | 328.91 | 1,686.8 | 434.8 | -262.2 | 507.8 | 0.00 | 0.00 | 0.00 |
| 1,900.0 | 30.25 | 328.91 | 1,773.2 | 478.0 | -288.2 | 558.2 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 30.25 | 328.91 | 1,859.6 | 521.1 | -314.2 | 608.5 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 30.25 | 328.91 | 1,946.0 | 564.3 | -340.2 | 658.9 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 30.25 | 328.91 | 2,032.4 | 607.4 | -366.2 | 709.3 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 30.25 | 328.91 | 2,118.7 | 650.6 | -392.3 | 759.7 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 30.25 | 328.91 | 2,205.1 | 693.7 | -418.3 | 810.1 | 0.00 | 0.00 | 0.00 |
| 2,500.0 | 30.25 | 328.91 | 2,291.5 | 736.9 | -444.3 | 860.5 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 30.25 | 328.91 | 2,377.9 | 780.0 | -470.3 | 910.8 | 0.00 | 0.00 | 0.00 |
| G' Sand | | | | | | | | | |
| 2,651.1 | 30.25 | 328.91 | 2,422.0 | 802.1 | -483.6 | 936.6 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 30.25 | 328.91 | 2,464.3 | 823.2 | -496.3 | 961.2 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 30.25 | 328.91 | 2,550.6 | 866.3 | -522.3 | 1,011.6 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 30.25 | 328.91 | 2,637.0 | 909.5 | -548.4 | 1,062.0 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 30.25 | 328.91 | 2,723.4 | 952.6 | -574.4 | 1,112.4 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 30.25 | 328.91 | 2,809.8 | 995.8 | -600.4 | 1,162.8 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 30.25 | 328.91 | 2,896.2 | 1,038.9 | -626.4 | 1,213.1 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 30.25 | 328.91 | 2,982.5 | 1,082.1 | -652.4 | 1,263.5 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 30.25 | 328.91 | 3,068.9 | 1,125.2 | -678.4 | 1,313.9 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 30.25 | 328.91 | 3,155.3 | 1,168.3 | -704.4 | 1,364.3 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 30.25 | 328.91 | 3,241.7 | 1,211.5 | -730.5 | 1,414.7 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 30.25 | 328.91 | 3,328.1 | 1,254.6 | -756.5 | 1,465.1 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 30.25 | 328.91 | 3,414.4 | 1,297.8 | -782.5 | 1,515.4 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 30.25 | 328.91 | 3,500.8 | 1,340.9 | -808.5 | 1,565.8 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 30.25 | 328.91 | 3,587.2 | 1,384.1 | -834.5 | 1,616.2 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 30.25 | 328.91 | 3,673.6 | 1,427.2 | -860.5 | 1,666.6 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 30.25 | 328.91 | 3,760.0 | 1,470.4 | -886.6 | 1,717.0 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 30.25 | 328.91 | 3,846.3 | 1,513.5 | -912.6 | 1,767.4 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 30.25 | 328.91 | 3,932.7 | 1,556.7 | -938.6 | 1,817.7 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 30.25 | 328.91 | 4,019.1 | 1,599.8 | -964.6 | 1,868.1 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 30.25 | 328.91 | 4,105.5 | 1,643.0 | -990.6 | 1,918.5 | 0.00 | 0.00 | 0.00 |



Well Planning Report



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|------------------|---------------------|-------------------------------------|------------------------------|
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| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7167.0usft (H&P #522) |
| Project: | Mesa County, CO | MD Reference: | well @ 7167.0usft (H&P #522) |
| Site: | Nichols 24-06A | North Reference: | True |
| Well: | Nichols 0994-13-20W | 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 | | | | | | | | | |
| 4,677.0 | 30.25 | 328.91 | 4,172.0 | 1,676.2 | -1,010.6 | 1,957.3 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 30.25 | 328.91 | 4,191.9 | 1,686.1 | -1,016.6 | 1,968.9 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 30.25 | 328.91 | 4,278.2 | 1,729.3 | -1,042.6 | 2,019.3 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 30.25 | 328.91 | 4,364.6 | 1,772.4 | -1,068.7 | 2,069.7 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 30.25 | 328.91 | 4,451.0 | 1,815.6 | -1,094.7 | 2,120.0 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 30.25 | 328.91 | 4,537.4 | 1,858.7 | -1,120.7 | 2,170.4 | 0.00 | 0.00 | 0.00 |
| Drop 3° / 100' | | | | | | | | | |
| 5,183.8 | 30.25 | 328.91 | 4,609.8 | 1,894.8 | -1,142.5 | 2,212.6 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 29.77 | 328.91 | 4,623.8 | 1,901.8 | -1,146.7 | 2,220.7 | 3.00 | -3.00 | 0.00 |
| 5,300.0 | 26.77 | 328.91 | 4,711.9 | 1,942.3 | -1,171.1 | 2,268.1 | 3.00 | -3.00 | 0.00 |
| 5,400.0 | 23.77 | 328.91 | 4,802.3 | 1,978.9 | -1,193.2 | 2,310.8 | 3.00 | -3.00 | 0.00 |
| 5,500.0 | 20.77 | 328.91 | 4,894.8 | 2,011.3 | -1,212.7 | 2,348.7 | 3.00 | -3.00 | 0.00 |
| 5,600.0 | 17.77 | 328.91 | 4,989.2 | 2,039.6 | -1,229.8 | 2,381.7 | 3.00 | -3.00 | 0.00 |
| 5,700.0 | 14.77 | 328.91 | 5,085.2 | 2,063.6 | -1,244.2 | 2,409.7 | 3.00 | -3.00 | 0.00 |
| 5,800.0 | 11.77 | 328.91 | 5,182.5 | 2,083.2 | -1,256.1 | 2,432.6 | 3.00 | -3.00 | 0.00 |
| 5,900.0 | 8.77 | 328.91 | 5,280.9 | 2,098.5 | -1,265.3 | 2,450.4 | 3.00 | -3.00 | 0.00 |
| 6,000.0 | 5.77 | 328.91 | 5,380.1 | 2,109.3 | -1,271.8 | 2,463.1 | 3.00 | -3.00 | 0.00 |
| 6,100.0 | 2.77 | 328.91 | 5,479.8 | 2,115.7 | -1,275.7 | 2,470.5 | 3.00 | -3.00 | 0.00 |
| EOB @ Vertical - TOG | | | | | | | | | |
| 6,192.2 | 0.00 | 0.00 | 5,572.0 | 2,117.6 | -1,276.8 | 2,472.7 | 3.00 | -3.00 | 0.00 |
| 6,200.0 | 0.00 | 0.00 | 5,579.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 6,300.0 | 0.00 | 0.00 | 5,679.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 0.00 | 0.00 | 5,779.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 6,500.0 | 0.00 | 0.00 | 5,879.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 0.00 | 0.00 | 5,979.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 6,700.0 | 0.00 | 0.00 | 6,079.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 0.00 | 0.00 | 6,179.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 0.00 | 0.00 | 6,279.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 0.00 | 0.00 | 6,379.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| Cameo | | | | | | | | | |
| 7,092.2 | 0.00 | 0.00 | 6,472.0 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 0.00 | 0.00 | 6,479.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 0.00 | 0.00 | 6,579.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 0.00 | 0.00 | 6,679.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.00 | 0.00 | 6,779.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 0.00 | 0.00 | 6,879.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 0.00 | 0.00 | 6,979.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 0.00 | 0.00 | 7,079.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| Base Cameo Coal | | | | | | | | | |
| 7,752.2 | 0.00 | 0.00 | 7,132.0 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| Rollins | | | | | | | | | |
| 7,792.2 | 0.00 | 0.00 | 7,172.0 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 0.00 | 0.00 | 7,179.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 0.00 | 0.00 | 7,279.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 0.00 | 0.00 | 7,379.8 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |
| TD @ 8042.2' MD / 7422.0' TVD | | | | | | | | | |
| 8,042.2 | 0.00 | 0.00 | 7,422.0 | 2,117.6 | -1,276.8 | 2,472.7 | 0.00 | 0.00 | 0.00 |



Well Planning Report



| | | | |
|------------------|---------------------|-------------------------------------|------------------------------|
| Database: | EDM5002 | Local Co-ordinate Reference: | Well Nichols 0994-13-20W |
| Company: | Laramie Energy, LLC | TVD Reference: | well @ 7167.0usft (H&P #522) |
| Project: | Mesa County, CO | MD Reference: | well @ 7167.0usft (H&P #522) |
| Site: | Nichols 24-06A | North Reference: | True |
| Well: | Nichols 0994-13-20W | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Design #1 | | |

| Design Targets | | | | | | | | | |
|---------------------------|---------------|--------------|------------|--------------|--------------|-----------------|----------------|-----------|-------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| PBHL - Nichols 0994-13 | 0.00 | 0.00 | 7,422.0 | 2,117.6 | -1,276.8 | 1,531,924.03 | 2,339,003.92 | 39.270542 | -107.835071 |
| - plan hits target center | | | | | | | | | |
| - Circle (radius 50.0) | | | | | | | | | |

| Casing Points | | | | |
|-----------------------|-----------------------|--------|---------------------|-------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
| 1,530.0 | 1,453.6 | 8 5/8" | 8-5/8 | 11 |

| Formations | | | | | | |
|-----------------------|-----------------------|-----------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 2,651.1 | 2,422.0 | G' Sand | | | | |
| 4,677.0 | 4,172.0 | Williams Fork | | | | |
| 6,192.2 | 5,572.0 | TOG | | | | |
| 7,092.2 | 6,472.0 | Cameo | | | | |
| 7,752.2 | 7,132.0 | Base Cameo Coal | | | | |
| 7,792.2 | 7,172.0 | Rollins | | | | |

| Plan Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|---------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | | |
| | | +N/-S (usft) | +E/-W (usft) | Comment | |
| 300.0 | 300.0 | 0.0 | 0.0 | KOP (Build 3° / 100') | |
| 1,308.5 | 1,262.2 | 222.8 | -134.3 | EOB @ 30.25° Inc. / 328.91° Azm | |
| 5,183.8 | 4,609.8 | 1,894.8 | -1,142.5 | Drop 3° / 100' | |
| 6,192.2 | 5,572.0 | 2,117.6 | -1,276.8 | EOB @ Vertical | |
| 8,042.2 | 7,422.0 | 2,117.6 | -1,276.8 | TD @ 8042.2' MD / 7422.0' TVD | |