

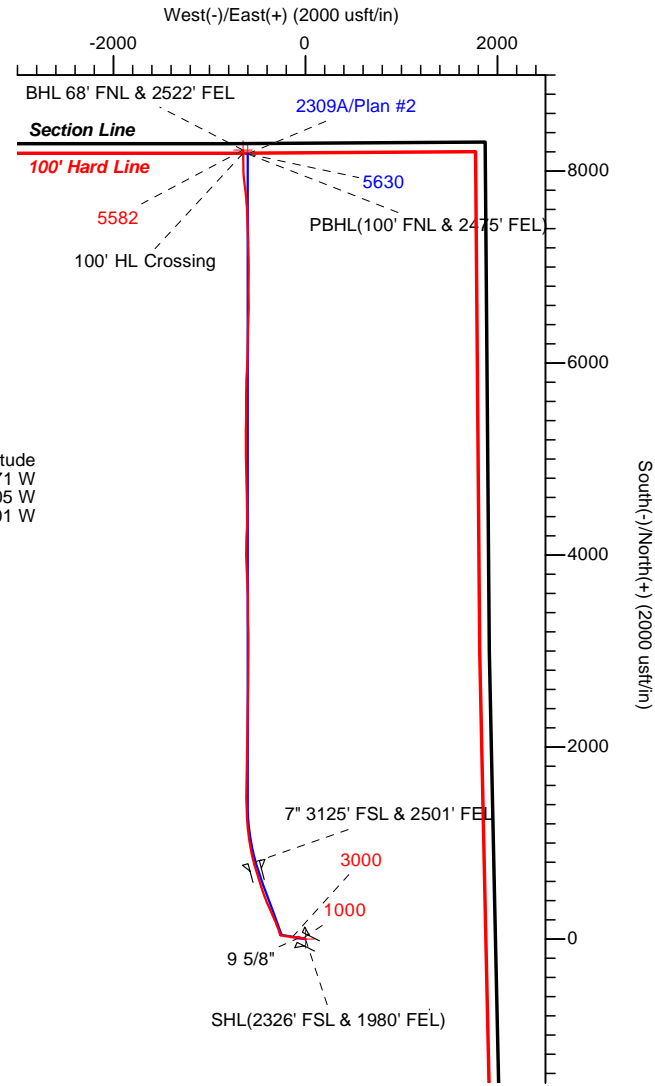
WHITING PETROLEUM CORPORATION

Project: Weld County, CO
Site: Razor Federal #26J
Well: 2309A
Wellbore: OH
Design: OH



Azimuths to True North
Magnetic North: 8.03°

Magnetic Field
Strength: 53050.4snT
Dip Angle: 67.41°
Date: 5/2/2014
Model: BGGM2013



PROJECT DETAILS: Weld County, CO

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone

DESIGN TARGET DETAILS

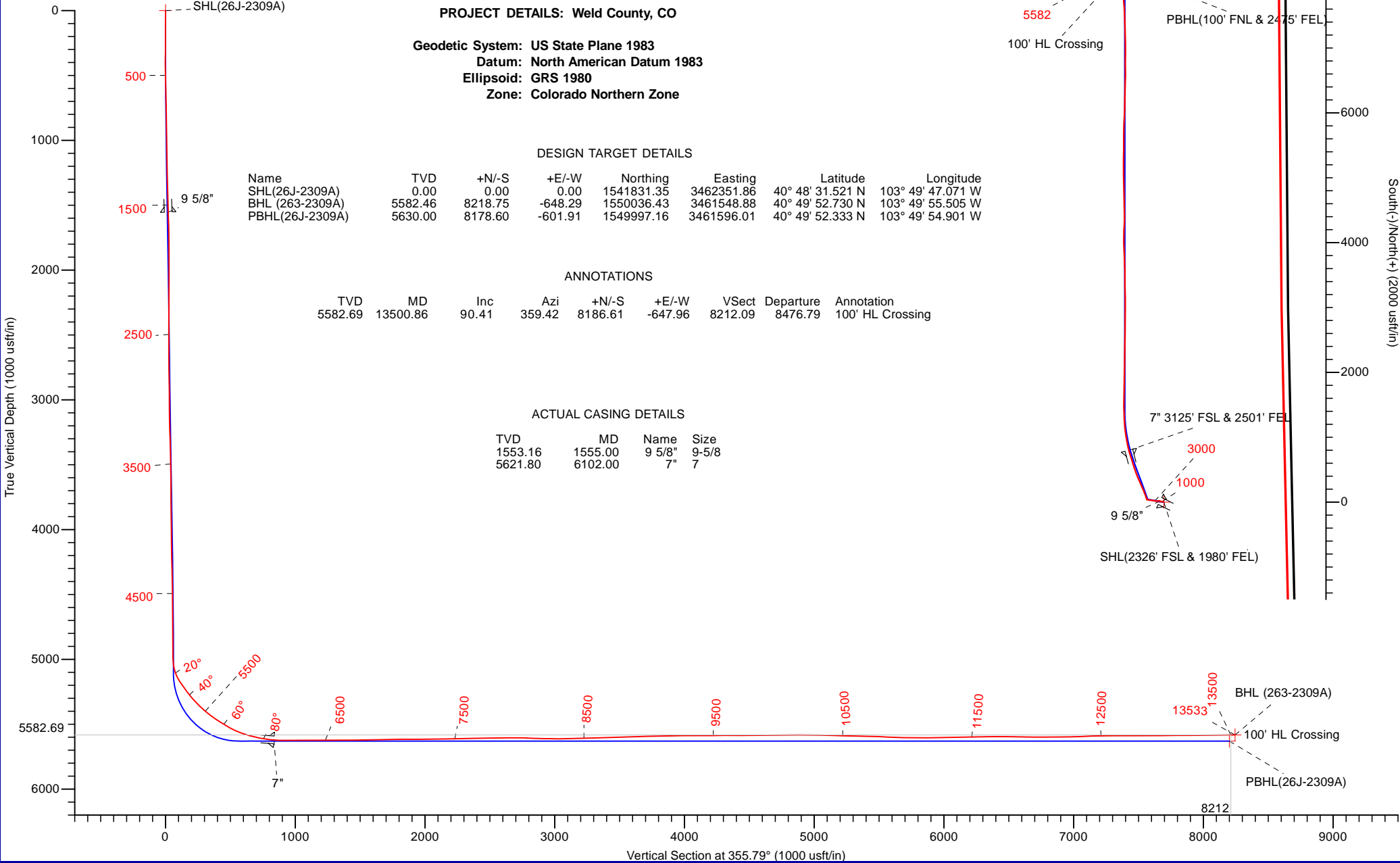
| Name | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|-----------------|---------|---------|---------|------------|------------|------------------|-------------------|
| SHL(26J-2309A) | 0.00 | 0.00 | 0.00 | 1541831.35 | 3462351.86 | 40° 48' 31.521 N | 103° 49' 47.071 W |
| BHL (263-2309A) | 5582.46 | 8218.75 | -648.29 | 1550036.43 | 3461548.88 | 40° 49' 52.730 N | 103° 49' 55.505 W |
| PBHL(26J-2309A) | 5630.00 | 8178.60 | -601.91 | 1549997.16 | 3461596.01 | 40° 49' 52.333 N | 103° 49' 54.901 W |

ANNOTATIONS

| TVD | MD | Inc | Azi | +N/-S | +E/-W | Vsect | Departure | Annotation |
|---------|----------|-------|--------|---------|---------|---------|-----------|------------------|
| 5582.69 | 13500.86 | 90.41 | 359.42 | 8186.61 | -647.96 | 8212.09 | 8476.79 | 100' HL Crossing |

ACTUAL CASING DETAILS

| TVD | MD | Name | Size |
|---------|---------|--------|-------|
| 1553.16 | 1555.00 | 9 5/8" | 9-5/8 |
| 5621.80 | 6102.00 | 7" | 7 |



LEAM DRILLING SYSTEMS LLC
2010 East Davis, Conroe, Texas 77301
Phone: 936/756-7577, Fax: 936/756-7595

Design: OH (2309A/OH)
Razor Federal #26J
Created By: David Vogler
Date: 15:24, July 08 2014
Approved: _____ Date: _____

LEAM Drilling Systems LLC

Survey Report

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

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

| | | | | | |
|-----------------------|--------------------|--------------|-------------------|-------------------|-------------------|
| Site | Razor Federal #26J | | | | |
| Site Position: | | Northing: | 1,541,830.76 usft | Latitude: | 40° 48' 31.522 N |
| From: | Lat/Long | Easting: | 3,462,319.75 usft | Longitude: | 103° 49' 47.489 W |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13-3/16 " | Grid Convergence: | 1.08 ° |

| | | | | | | |
|----------------------|-------|-----------|---------------------|-------------------|---------------|-------------------|
| Well | 2309A | | | | | |
| Well Position | +N/-S | 0.00 usft | Northing: | 1,541,831.36 usft | Latitude: | 40° 48' 31.521 N |
| | +E/-W | 0.00 usft | Easting: | 3,462,351.85 usft | Longitude: | 103° 49' 47.071 W |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 4,726.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | BGGM2013 | 5/2/2014 | 8.03 | 67.41 | 53,050 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|------|
| Design | OH | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 355.79 | |

| | | | | | |
|-----------------------|------------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 7/8/2014 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 132.00 | 13,482.00 | Survey #1 (OH) | LEAM_MWD | LEAM MWD | |
| 13,533.00 | 13,533.00 | Survey #2 (OH) | Project | Projection | |

| | | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|--|
| 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) | |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 132.00 | 0.35 | 171.76 | 132.00 | -0.40 | 0.06 | -0.40 | 0.27 | 0.27 | 0.00 | |
| 221.00 | 0.18 | 100.05 | 221.00 | -0.69 | 0.23 | -0.71 | 0.38 | -0.19 | -80.57 | |
| 312.00 | 0.40 | 123.82 | 312.00 | -0.89 | 0.64 | -0.94 | 0.27 | 0.24 | 26.12 | |
| 405.00 | 0.18 | 49.43 | 405.00 | -0.98 | 1.02 | -1.05 | 0.42 | -0.24 | -79.99 | |
| 496.00 | 1.05 | 309.15 | 495.99 | -0.36 | 0.48 | -0.39 | 1.20 | 0.96 | -110.20 | |
| 587.00 | 1.85 | 303.50 | 586.96 | 0.98 | -1.39 | 1.08 | 0.89 | 0.88 | -6.21 | |
| 678.00 | 2.90 | 302.50 | 677.88 | 3.02 | -4.56 | 3.35 | 1.15 | 1.15 | -1.10 | |
| 769.00 | 3.12 | 289.44 | 768.76 | 5.09 | -8.83 | 5.72 | 0.79 | 0.24 | -14.35 | |
| 861.00 | 3.56 | 287.73 | 860.60 | 6.79 | -13.91 | 7.79 | 0.49 | 0.48 | -1.86 | |

LEAM Drilling Systems LLC

Survey Report

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| 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) |
| 952.00 | 3.38 | 275.55 | 951.44 | 7.91 | -19.28 | 9.30 | 0.83 | -0.20 | -13.38 |
| 1,043.00 | 3.56 | 277.42 | 1,042.27 | 8.53 | -24.75 | 10.33 | 0.23 | 0.20 | 2.05 |
| 1,135.00 | 3.60 | 279.06 | 1,134.09 | 9.36 | -30.43 | 11.57 | 0.12 | 0.04 | 1.78 |
| 1,227.00 | 3.60 | 277.58 | 1,225.91 | 10.19 | -36.15 | 12.82 | 0.10 | 0.00 | -1.61 |
| 1,319.00 | 3.91 | 285.07 | 1,317.71 | 11.39 | -42.04 | 14.44 | 0.63 | 0.34 | 8.14 |
| 1,410.00 | 4.04 | 289.92 | 1,408.49 | 13.29 | -48.05 | 16.78 | 0.40 | 0.14 | 5.33 |
| 1,502.00 | 3.82 | 294.72 | 1,500.28 | 15.67 | -53.88 | 19.59 | 0.43 | -0.24 | 5.22 |
| 1,570.00 | 3.91 | 296.99 | 1,568.12 | 17.67 | -58.00 | 21.88 | 0.26 | 0.13 | 3.34 |
| 1,662.00 | 3.56 | 288.97 | 1,659.93 | 20.02 | -63.50 | 24.63 | 0.68 | -0.38 | -8.72 |
| 1,753.00 | 4.13 | 278.44 | 1,750.72 | 21.42 | -69.41 | 26.46 | 0.99 | 0.63 | -11.57 |
| 1,845.00 | 2.99 | 272.47 | 1,842.54 | 22.01 | -75.09 | 27.47 | 1.30 | -1.24 | -6.49 |
| 1,936.00 | 2.64 | 255.97 | 1,933.43 | 21.61 | -79.49 | 27.39 | 0.97 | -0.38 | -18.13 |
| 2,027.00 | 2.73 | 265.63 | 2,024.34 | 20.94 | -83.69 | 27.02 | 0.51 | 0.10 | 10.62 |
| 2,119.00 | 2.86 | 276.18 | 2,116.23 | 21.02 | -88.15 | 27.43 | 0.58 | 0.14 | 11.47 |
| 2,211.00 | 2.99 | 256.04 | 2,208.11 | 20.68 | -92.76 | 27.44 | 1.12 | 0.14 | -21.89 |
| 2,303.00 | 3.38 | 257.57 | 2,299.97 | 19.52 | -97.74 | 26.64 | 0.43 | 0.42 | 1.66 |
| 2,394.00 | 2.96 | 257.21 | 2,390.83 | 18.42 | -102.65 | 25.91 | 0.46 | -0.46 | -0.40 |
| 2,486.00 | 2.72 | 259.75 | 2,482.71 | 17.51 | -107.12 | 25.33 | 0.29 | -0.26 | 2.76 |
| 2,578.00 | 2.86 | 269.77 | 2,574.61 | 17.11 | -111.56 | 25.25 | 0.55 | 0.15 | 10.89 |
| 2,670.00 | 3.03 | 271.25 | 2,666.48 | 17.16 | -116.29 | 25.65 | 0.20 | 0.18 | 1.61 |
| 2,762.00 | 3.12 | 281.23 | 2,758.35 | 17.70 | -121.17 | 26.54 | 0.59 | 0.10 | 10.85 |
| 2,855.00 | 3.92 | 280.40 | 2,851.18 | 18.76 | -126.78 | 28.02 | 0.86 | 0.86 | -0.89 |
| 2,946.00 | 4.22 | 271.63 | 2,941.95 | 19.42 | -133.19 | 29.14 | 0.76 | 0.33 | -9.64 |
| 3,038.00 | 4.26 | 269.83 | 3,033.70 | 19.51 | -139.99 | 29.73 | 0.15 | 0.04 | -1.96 |
| 3,129.00 | 4.01 | 279.93 | 3,124.46 | 20.04 | -146.50 | 30.75 | 0.84 | -0.27 | 11.10 |
| 3,222.00 | 3.96 | 291.87 | 3,217.24 | 21.80 | -152.69 | 32.95 | 0.89 | -0.05 | 12.84 |
| 3,314.00 | 4.31 | 290.82 | 3,309.00 | 24.21 | -158.87 | 35.81 | 0.39 | 0.38 | -1.14 |
| 3,404.00 | 4.01 | 283.04 | 3,398.76 | 26.13 | -165.09 | 38.17 | 0.71 | -0.33 | -8.64 |
| 3,496.00 | 3.74 | 278.67 | 3,490.55 | 27.30 | -171.19 | 39.80 | 0.43 | -0.29 | -4.75 |
| 3,588.00 | 4.13 | 277.29 | 3,582.33 | 28.18 | -177.44 | 41.13 | 0.44 | 0.42 | -1.50 |
| 3,681.00 | 3.74 | 271.76 | 3,675.11 | 28.69 | -183.80 | 42.11 | 0.58 | -0.42 | -5.95 |
| 3,773.00 | 3.47 | 276.41 | 3,766.93 | 29.10 | -189.56 | 42.93 | 0.43 | -0.29 | 5.05 |
| 3,866.00 | 3.69 | 271.01 | 3,859.75 | 29.46 | -195.35 | 43.73 | 0.43 | 0.24 | -5.81 |
| 3,959.00 | 3.65 | 274.88 | 3,952.56 | 29.77 | -201.29 | 44.47 | 0.27 | -0.04 | 4.16 |
| 4,051.00 | 4.35 | 276.93 | 4,044.34 | 30.44 | -207.68 | 45.60 | 0.78 | 0.76 | 2.23 |
| 4,143.00 | 3.69 | 275.23 | 4,136.11 | 31.13 | -214.09 | 46.76 | 0.73 | -0.72 | -1.85 |
| 4,235.00 | 3.49 | 288.84 | 4,227.93 | 32.30 | -219.69 | 48.34 | 0.95 | -0.22 | 14.79 |
| 4,326.00 | 3.75 | 283.81 | 4,318.75 | 33.91 | -225.20 | 50.35 | 0.45 | 0.29 | -5.53 |
| 4,419.00 | 3.82 | 280.58 | 4,411.55 | 35.20 | -231.20 | 52.08 | 0.24 | 0.08 | -3.47 |
| 4,510.00 | 3.82 | 282.01 | 4,502.34 | 36.39 | -237.14 | 53.70 | 0.10 | 0.00 | 1.57 |
| 4,603.00 | 3.96 | 274.18 | 4,595.13 | 37.27 | -243.37 | 55.04 | 0.59 | 0.15 | -8.42 |
| 4,695.00 | 3.12 | 271.55 | 4,686.95 | 37.57 | -249.05 | 55.75 | 0.93 | -0.91 | -2.86 |
| 4,787.00 | 1.76 | 268.43 | 4,778.87 | 37.60 | -252.96 | 56.07 | 1.48 | -1.48 | -3.39 |

LEAM Drilling Systems LLC

Survey Report

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| 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) |
| 4,879.00 | 0.70 | 283.61 | 4,870.85 | 37.69 | -254.92 | 56.30 | 1.20 | -1.15 | 16.50 |
| 4,970.00 | 0.62 | 286.10 | 4,961.84 | 37.96 | -255.93 | 56.64 | 0.09 | -0.09 | 2.74 |
| 5,062.00 | 9.67 | 333.04 | 5,053.38 | 45.00 | -259.92 | 63.96 | 10.06 | 9.84 | 51.02 |
| 5,154.00 | 27.34 | 341.37 | 5,140.29 | 72.12 | -270.26 | 91.77 | 19.37 | 19.21 | 9.05 |
| 5,185.00 | 34.74 | 339.50 | 5,166.84 | 87.16 | -275.63 | 107.16 | 24.07 | 23.87 | -6.03 |
| 5,225.00 | 36.97 | 339.96 | 5,199.25 | 109.14 | -283.75 | 129.68 | 5.62 | 5.58 | 1.15 |
| 5,255.00 | 36.97 | 339.28 | 5,223.22 | 126.05 | -290.03 | 147.01 | 1.36 | 0.00 | -2.27 |
| 5,286.00 | 37.19 | 338.26 | 5,247.95 | 143.48 | -296.80 | 164.88 | 2.11 | 0.71 | -3.29 |
| 5,317.00 | 39.82 | 337.59 | 5,272.21 | 161.36 | -304.05 | 183.24 | 8.59 | 8.48 | -2.16 |
| 5,347.00 | 43.32 | 336.51 | 5,294.65 | 179.68 | -311.82 | 202.09 | 11.91 | 11.67 | -3.60 |
| 5,378.00 | 43.87 | 336.17 | 5,317.10 | 199.26 | -320.40 | 222.25 | 1.93 | 1.77 | -1.10 |
| 5,409.00 | 44.60 | 335.95 | 5,339.32 | 219.03 | -329.17 | 242.60 | 2.41 | 2.35 | -0.71 |
| 5,439.00 | 48.04 | 336.22 | 5,360.03 | 238.86 | -337.97 | 263.02 | 11.49 | 11.47 | 0.90 |
| 5,470.00 | 49.49 | 336.56 | 5,380.46 | 260.22 | -347.30 | 285.01 | 4.75 | 4.68 | 1.10 |
| 5,501.00 | 51.34 | 336.61 | 5,400.22 | 282.14 | -356.80 | 307.57 | 5.97 | 5.97 | 0.16 |
| 5,532.00 | 52.79 | 337.12 | 5,419.27 | 304.63 | -366.40 | 330.70 | 4.85 | 4.68 | 1.65 |
| 5,562.00 | 55.64 | 337.01 | 5,436.82 | 327.04 | -375.88 | 353.75 | 9.50 | 9.50 | -0.37 |
| 5,592.00 | 56.35 | 336.33 | 5,453.59 | 349.87 | -385.73 | 377.24 | 3.02 | 2.37 | -2.27 |
| 5,623.00 | 58.04 | 336.31 | 5,470.39 | 373.73 | -396.20 | 401.81 | 5.45 | 5.45 | -0.06 |
| 5,653.00 | 59.09 | 336.80 | 5,486.03 | 397.22 | -406.38 | 425.98 | 3.77 | 3.50 | 1.63 |
| 5,684.00 | 60.07 | 337.90 | 5,501.73 | 421.89 | -416.67 | 451.34 | 4.40 | 3.16 | 3.55 |
| 5,714.00 | 60.75 | 339.66 | 5,516.54 | 446.20 | -426.12 | 476.28 | 5.58 | 2.27 | 5.87 |
| 5,745.00 | 62.18 | 340.78 | 5,531.35 | 471.83 | -435.33 | 502.52 | 5.60 | 4.61 | 3.61 |
| 5,776.00 | 64.66 | 341.97 | 5,545.22 | 498.10 | -444.18 | 529.37 | 8.71 | 8.00 | 3.84 |
| 5,808.00 | 68.15 | 341.75 | 5,558.03 | 525.96 | -453.31 | 557.82 | 10.92 | 10.91 | -0.69 |
| 5,838.00 | 71.87 | 342.33 | 5,568.28 | 552.78 | -462.00 | 585.20 | 12.53 | 12.40 | 1.93 |
| 5,869.00 | 73.14 | 342.50 | 5,577.60 | 580.96 | -470.93 | 613.97 | 4.13 | 4.10 | 0.55 |
| 5,900.00 | 73.48 | 342.12 | 5,586.51 | 609.25 | -479.95 | 642.84 | 1.61 | 1.10 | -1.23 |
| 5,930.00 | 76.18 | 341.80 | 5,594.36 | 636.78 | -488.92 | 670.95 | 9.06 | 9.00 | -1.07 |
| 5,961.00 | 78.14 | 342.40 | 5,601.24 | 665.54 | -498.21 | 700.32 | 6.60 | 6.32 | 1.94 |
| 5,992.00 | 79.52 | 342.82 | 5,607.25 | 694.56 | -507.30 | 729.93 | 4.65 | 4.45 | 1.35 |
| 6,022.00 | 80.07 | 343.05 | 5,612.56 | 722.79 | -515.96 | 758.72 | 1.98 | 1.83 | 0.77 |
| 6,059.00 | 83.55 | 343.85 | 5,617.84 | 757.89 | -526.39 | 794.49 | 9.65 | 9.41 | 2.16 |
| 6,159.00 | 88.97 | 347.11 | 5,624.36 | 854.44 | -551.39 | 892.61 | 6.32 | 5.42 | 3.26 |
| 6,221.00 | 90.02 | 350.50 | 5,624.90 | 915.25 | -563.42 | 954.14 | 5.72 | 1.69 | 5.47 |
| 6,309.00 | 90.59 | 348.82 | 5,624.44 | 1,001.82 | -579.22 | 1,041.63 | 2.02 | 0.65 | -1.91 |
| 6,396.00 | 90.14 | 353.65 | 5,623.88 | 1,087.77 | -592.47 | 1,128.33 | 5.58 | -0.52 | 5.55 |
| 6,481.00 | 89.78 | 355.45 | 5,623.94 | 1,172.38 | -600.54 | 1,213.31 | 2.16 | -0.42 | 2.12 |
| 6,569.00 | 90.83 | 356.45 | 5,623.47 | 1,260.16 | -606.76 | 1,301.30 | 1.65 | 1.19 | 1.14 |
| 6,655.00 | 90.47 | 358.00 | 5,622.50 | 1,346.05 | -610.92 | 1,387.27 | 1.85 | -0.42 | 1.80 |
| 6,745.00 | 89.86 | 358.40 | 5,622.24 | 1,436.01 | -613.75 | 1,477.19 | 0.81 | -0.68 | 0.44 |
| 6,832.00 | 91.35 | 0.60 | 5,621.32 | 1,522.99 | -614.51 | 1,563.99 | 3.05 | 1.71 | 2.53 |
| 6,918.00 | 90.97 | 2.08 | 5,619.58 | 1,608.95 | -612.50 | 1,649.57 | 1.78 | -0.44 | 1.72 |

LEAM Drilling Systems LLC

Survey Report

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| 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) | |
| 7,003.00 | 91.61 | 0.02 | 5,617.66 | 1,693.91 | -610.94 | 1,734.19 | 2.54 | 0.75 | -2.42 | |
| 7,088.00 | 90.08 | 1.71 | 5,616.41 | 1,778.88 | -609.66 | 1,818.84 | 2.68 | -1.80 | 1.99 | |
| 7,173.00 | 90.30 | 1.34 | 5,616.13 | 1,863.85 | -607.39 | 1,903.41 | 0.51 | 0.26 | -0.44 | |
| 7,259.00 | 90.36 | 1.48 | 5,615.63 | 1,949.82 | -605.28 | 1,989.00 | 0.18 | 0.07 | 0.16 | |
| 7,344.00 | 90.83 | 359.50 | 5,614.75 | 2,034.81 | -604.55 | 2,073.70 | 2.39 | 0.55 | -2.33 | |
| 7,430.00 | 91.10 | 359.68 | 5,613.30 | 2,120.80 | -605.17 | 2,159.50 | 0.38 | 0.31 | 0.21 | |
| 7,518.00 | 90.55 | 1.53 | 5,612.03 | 2,208.78 | -604.24 | 2,247.18 | 2.19 | -0.63 | 2.10 | |
| 7,607.00 | 91.07 | 0.83 | 5,610.78 | 2,297.75 | -602.41 | 2,335.77 | 0.98 | 0.58 | -0.79 | |
| 7,694.00 | 91.80 | 1.06 | 5,608.60 | 2,384.71 | -600.97 | 2,422.39 | 0.88 | 0.84 | 0.26 | |
| 7,779.00 | 90.53 | 1.57 | 5,606.87 | 2,469.67 | -599.02 | 2,506.98 | 1.61 | -1.49 | 0.60 | |
| 7,864.00 | 91.18 | 1.12 | 5,605.60 | 2,554.63 | -597.03 | 2,591.57 | 0.93 | 0.76 | -0.53 | |
| 7,948.00 | 90.13 | 1.73 | 5,604.64 | 2,638.60 | -594.94 | 2,675.16 | 1.45 | -1.25 | 0.73 | |
| 8,036.00 | 88.49 | 0.51 | 5,605.70 | 2,726.57 | -593.22 | 2,762.77 | 2.32 | -1.86 | -1.39 | |
| 8,132.00 | 87.35 | 359.02 | 5,609.18 | 2,822.50 | -593.61 | 2,858.47 | 1.95 | -1.19 | -1.55 | |
| 8,219.00 | 89.36 | 0.66 | 5,611.68 | 2,909.46 | -593.85 | 2,945.21 | 2.98 | 2.31 | 1.89 | |
| 8,309.00 | 89.52 | 0.65 | 5,612.56 | 2,999.45 | -592.82 | 3,034.88 | 0.18 | 0.18 | -0.01 | |
| 8,399.00 | 91.48 | 359.06 | 5,611.78 | 3,089.44 | -593.05 | 3,124.64 | 2.80 | 2.18 | -1.77 | |
| 8,488.00 | 92.23 | 359.72 | 5,608.90 | 3,178.39 | -594.00 | 3,213.42 | 1.12 | 0.84 | 0.74 | |
| 8,578.00 | 91.43 | 357.57 | 5,606.02 | 3,268.31 | -596.13 | 3,303.25 | 2.55 | -0.89 | -2.39 | |
| 8,669.00 | 91.64 | 359.48 | 5,603.58 | 3,359.24 | -598.47 | 3,394.11 | 2.11 | 0.23 | 2.10 | |
| 8,761.00 | 92.06 | 359.92 | 5,600.61 | 3,451.19 | -598.95 | 3,485.85 | 0.66 | 0.46 | 0.48 | |
| 8,853.00 | 92.36 | 359.39 | 5,597.07 | 3,543.12 | -599.50 | 3,577.57 | 0.66 | 0.33 | -0.58 | |
| 8,944.00 | 92.61 | 358.06 | 5,593.12 | 3,634.01 | -601.52 | 3,668.37 | 1.49 | 0.27 | -1.46 | |
| 9,035.00 | 89.92 | 356.90 | 5,591.11 | 3,724.89 | -605.52 | 3,759.29 | 3.22 | -2.96 | -1.27 | |
| 9,126.00 | 90.16 | 358.30 | 5,591.05 | 3,815.81 | -609.34 | 3,850.25 | 1.56 | 0.26 | 1.54 | |
| 9,218.00 | 91.11 | 357.27 | 5,590.03 | 3,907.73 | -612.89 | 3,942.18 | 1.52 | 1.03 | -1.12 | |
| 9,309.00 | 90.66 | 358.97 | 5,588.62 | 3,998.67 | -615.88 | 4,033.09 | 1.93 | -0.49 | 1.87 | |
| 9,400.00 | 90.20 | 1.47 | 5,587.94 | 4,089.66 | -615.53 | 4,123.81 | 2.79 | -0.51 | 2.75 | |
| 9,491.00 | 90.50 | 1.68 | 5,587.38 | 4,180.62 | -613.02 | 4,214.35 | 0.40 | 0.33 | 0.23 | |
| 9,584.00 | 90.00 | 2.53 | 5,586.98 | 4,273.56 | -609.61 | 4,306.78 | 1.06 | -0.54 | 0.91 | |
| 9,675.00 | 90.30 | 2.97 | 5,586.74 | 4,364.45 | -605.24 | 4,397.11 | 0.59 | 0.33 | 0.48 | |
| 9,767.00 | 90.25 | 359.24 | 5,586.30 | 4,456.42 | -603.47 | 4,488.70 | 4.05 | -0.05 | -4.05 | |
| 9,858.00 | 90.63 | 356.95 | 5,585.60 | 4,547.36 | -606.49 | 4,579.61 | 2.55 | 0.42 | -2.52 | |
| 9,950.00 | 90.14 | 357.29 | 5,584.98 | 4,639.24 | -611.12 | 4,671.59 | 0.65 | -0.53 | 0.37 | |
| 10,042.00 | 90.21 | 359.74 | 5,584.70 | 4,731.20 | -613.50 | 4,763.47 | 2.66 | 0.08 | 2.66 | |
| 10,134.00 | 90.41 | 358.93 | 5,584.20 | 4,823.19 | -614.57 | 4,855.30 | 0.91 | 0.22 | -0.88 | |
| 10,227.00 | 90.47 | 357.62 | 5,583.49 | 4,916.15 | -617.37 | 4,948.20 | 1.41 | 0.06 | -1.41 | |
| 10,319.00 | 89.11 | 359.24 | 5,583.82 | 5,008.11 | -619.89 | 5,040.10 | 2.30 | -1.48 | 1.76 | |
| 10,411.00 | 88.06 | 0.58 | 5,586.10 | 5,100.08 | -620.03 | 5,131.83 | 1.85 | -1.14 | 1.46 | |
| 10,502.00 | 88.24 | 1.31 | 5,589.03 | 5,191.01 | -618.53 | 5,222.42 | 0.83 | 0.20 | 0.80 | |
| 10,594.00 | 88.74 | 0.88 | 5,591.46 | 5,282.97 | -616.77 | 5,313.99 | 0.72 | 0.54 | -0.47 | |
| 10,686.00 | 88.93 | 358.88 | 5,593.33 | 5,374.94 | -616.97 | 5,405.73 | 2.18 | 0.21 | -2.17 | |
| 10,778.00 | 87.90 | 0.14 | 5,595.87 | 5,466.90 | -617.75 | 5,497.50 | 1.77 | -1.12 | 1.37 | |
| 10,869.00 | 87.41 | 0.48 | 5,599.60 | 5,557.82 | -617.26 | 5,588.14 | 0.66 | -0.54 | 0.37 | |

LEAM Drilling Systems LLC

Survey Report

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| 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) |
| 10,961.00 | 88.66 | 0.96 | 5,602.75 | 5,649.76 | -616.11 | 5,679.74 | 1.46 | 1.36 | 0.52 |
| 11,053.00 | 89.26 | 0.80 | 5,604.42 | 5,741.73 | -614.69 | 5,771.37 | 0.67 | 0.65 | -0.17 |
| 11,146.00 | 89.65 | 1.24 | 5,605.31 | 5,834.71 | -613.04 | 5,863.97 | 0.63 | 0.42 | 0.47 |
| 11,237.00 | 91.11 | 3.13 | 5,604.70 | 5,925.64 | -609.57 | 5,954.40 | 2.62 | 1.60 | 2.08 |
| 11,330.00 | 91.33 | 2.36 | 5,602.72 | 6,018.51 | -605.12 | 6,046.69 | 0.86 | 0.24 | -0.83 |
| 11,423.00 | 91.95 | 2.75 | 5,600.06 | 6,111.38 | -600.97 | 6,139.01 | 0.79 | 0.67 | 0.42 |
| 11,515.00 | 91.21 | 0.25 | 5,597.52 | 6,203.30 | -598.57 | 6,230.51 | 2.83 | -0.80 | -2.72 |
| 11,607.00 | 90.93 | 0.42 | 5,595.81 | 6,295.29 | -598.03 | 6,322.20 | 0.36 | -0.30 | 0.18 |
| 11,699.00 | 89.06 | 1.56 | 5,595.81 | 6,387.27 | -596.44 | 6,413.82 | 2.38 | -2.03 | 1.24 |
| 11,791.00 | 89.58 | 2.17 | 5,596.91 | 6,479.21 | -593.44 | 6,505.29 | 0.87 | 0.57 | 0.66 |
| 11,883.00 | 89.12 | 0.54 | 5,597.95 | 6,571.18 | -591.27 | 6,596.85 | 1.84 | -0.50 | -1.77 |
| 11,975.00 | 89.49 | 358.95 | 5,599.07 | 6,663.17 | -591.68 | 6,688.62 | 1.77 | 0.40 | -1.73 |
| 12,067.00 | 90.12 | 359.90 | 5,599.38 | 6,755.16 | -592.60 | 6,780.44 | 1.24 | 0.68 | 1.03 |
| 12,160.00 | 90.58 | 1.17 | 5,598.81 | 6,848.15 | -591.73 | 6,873.11 | 1.45 | 0.49 | 1.37 |
| 12,252.00 | 91.15 | 0.07 | 5,597.42 | 6,940.13 | -590.74 | 6,964.77 | 1.35 | 0.62 | -1.20 |
| 12,343.00 | 91.79 | 359.37 | 5,595.09 | 7,031.10 | -591.18 | 7,055.53 | 1.04 | 0.70 | -0.77 |
| 12,435.00 | 92.48 | 359.42 | 5,591.66 | 7,123.03 | -592.15 | 7,147.28 | 0.75 | 0.75 | 0.05 |
| 12,527.00 | 90.71 | 358.18 | 5,589.10 | 7,214.97 | -594.08 | 7,239.11 | 2.35 | -1.92 | -1.35 |
| 12,619.00 | 89.61 | 356.99 | 5,588.84 | 7,306.88 | -597.96 | 7,331.07 | 1.76 | -1.20 | -1.29 |
| 12,710.00 | 90.26 | 359.29 | 5,588.95 | 7,397.83 | -600.91 | 7,421.98 | 2.63 | 0.71 | 2.53 |
| 12,802.00 | 90.16 | 358.74 | 5,588.61 | 7,489.82 | -602.49 | 7,513.84 | 0.61 | -0.11 | -0.60 |
| 12,894.00 | 90.66 | 356.82 | 5,587.95 | 7,581.74 | -606.05 | 7,605.77 | 2.16 | 0.54 | -2.09 |
| 12,986.00 | 90.33 | 355.58 | 5,587.15 | 7,673.53 | -612.15 | 7,697.77 | 1.39 | -0.36 | -1.35 |
| 13,078.00 | 90.18 | 352.87 | 5,586.75 | 7,765.06 | -621.41 | 7,789.72 | 2.95 | -0.16 | -2.95 |
| 13,169.00 | 90.54 | 352.88 | 5,586.17 | 7,855.35 | -632.69 | 7,880.60 | 0.40 | 0.40 | 0.01 |
| 13,263.00 | 90.51 | 355.85 | 5,585.31 | 7,948.88 | -641.92 | 7,974.56 | 3.16 | -0.03 | 3.16 |
| 13,355.00 | 90.80 | 359.15 | 5,584.26 | 8,040.78 | -645.94 | 8,066.50 | 3.60 | 0.32 | 3.59 |
| 13,448.00 | 90.60 | 359.12 | 5,583.12 | 8,133.76 | -647.34 | 8,159.33 | 0.22 | -0.22 | -0.03 |
| 13,482.00 | 90.41 | 359.42 | 5,582.82 | 8,167.75 | -647.77 | 8,193.27 | 1.04 | -0.56 | 0.88 |
| 13,533.00 | 90.41 | 359.42 | 5,582.46 | 8,218.75 | -648.29 | 8,244.17 | 0.00 | 0.00 | 0.00 |

LEAM Drilling Systems LLC

Survey Report

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| 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 |
| SHL(26J-2309A) - actual wellpath hits target center - Point | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,541,831.36 | 3,462,351.85 | 40° 48' 31.521 N | 103° 49' 47.071 W |
| BHL (26J-2309A) - actual wellpath hits target center - Point | 0.00 | 0.00 | 5,582.46 | 8,218.75 | -648.29 | 1,550,036.44 | 3,461,548.88 | 40° 49' 52.730 N | 103° 49' 55.505 W |
| PBHL(26J-2309A) - actual wellpath misses target center by 66.68usft at 13482.00usft MD (5582.82 TVD, 8167.75 N, -647.77 E) - Point | 0.00 | 0.00 | 5,630.00 | 8,178.60 | -601.91 | 1,549,997.17 | 3,461,596.01 | 40° 49' 52.333 N | 103° 49' 54.901 W |

| Casing Points | | | | | |
|-----------------------------|-----------------------------|--------|--|---------------------------|-------------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name | | Casing Diameter (") | Hole Diameter (") |
| 1,555.00 | 1,553.16 | 9 5/8" | | 9-5/8 | 12-1/4 |
| 6,102.00 | 5,621.80 | 7" | | 7 | 7-1/2 |

| Design Annotations | | | | | |
|-----------------------------|-----------------------------|-------------------|-----------------|------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment | |
| | | +N/-S (usft) | +E/-W (usft) | | |
| 13,500.86 | 5,582.69 | 8,186.61 | -647.96 | 100' HL Crossing | |

LEAM Drilling Systems LLC

Survey Report - Geographic

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

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

| | | | | | |
|-----------------------|--------------------|--------------|-------------------|-------------------|-------------------|
| Site | Razor Federal #26J | | | | |
| Site Position: | | Northing: | 1,541,830.76 usft | Latitude: | 40° 48' 31.522 N |
| From: | Lat/Long | Easting: | 3,462,319.75 usft | Longitude: | 103° 49' 47.489 W |
| Position Uncertainty: | 0.00 usft | Slot Radius: | 13-3/16 " | Grid Convergence: | 1.08 ° |

| | | | | | | |
|----------------------|-------|-----------|---------------------|-------------------|---------------|-------------------|
| Well | 2309A | | | | | |
| Well Position | +N/-S | 0.00 usft | Northing: | 1,541,831.36 usft | Latitude: | 40° 48' 31.521 N |
| | +E/-W | 0.00 usft | Easting: | 3,462,351.85 usft | Longitude: | 103° 49' 47.071 W |
| Position Uncertainty | | 0.00 usft | Wellhead Elevation: | 0.00 usft | Ground Level: | 4,726.00 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | BGGM2013 | 5/2/2014 | 8.03 | 67.41 | 53,050 |

| | | | | | |
|--------------------------|--------------------------------|---------------------|---------------------|----------------------|------|
| Design | OH | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 355.79 | |

| | | | | | |
|-----------------------|------------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 7/8/2014 | | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 132.00 | 13,482.00 | Survey #1 (OH) | LEAM_MWD | LEAM MWD | |
| 13,533.00 | 13,533.00 | Survey #2 (OH) | Project | Projection | |

| | | | | | | | | | |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|----------------------------|---------------------------|------------------|-------------------|
| Survey | | | | | | | | | |
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 1,541,831.36 | 3,462,351.85 | 40° 48' 31.521 N | 103° 49' 47.071 W |
| 132.00 | 0.35 | 171.76 | 132.00 | -0.40 | 0.06 | 1,541,830.96 | 3,462,351.92 | 40° 48' 31.518 N | 103° 49' 47.070 W |
| 221.00 | 0.18 | 100.05 | 221.00 | -0.69 | 0.23 | 1,541,830.67 | 3,462,352.10 | 40° 48' 31.515 N | 103° 49' 47.068 W |
| 312.00 | 0.40 | 123.82 | 312.00 | -0.89 | 0.64 | 1,541,830.47 | 3,462,352.51 | 40° 48' 31.513 N | 103° 49' 47.063 W |
| 405.00 | 0.18 | 49.43 | 405.00 | -0.98 | 1.02 | 1,541,830.40 | 3,462,352.89 | 40° 48' 31.512 N | 103° 49' 47.058 W |
| 496.00 | 1.05 | 309.15 | 495.99 | -0.36 | 0.48 | 1,541,831.01 | 3,462,352.34 | 40° 48' 31.518 N | 103° 49' 47.065 W |
| 587.00 | 1.85 | 303.50 | 586.96 | 0.98 | -1.39 | 1,541,832.31 | 3,462,350.44 | 40° 48' 31.531 N | 103° 49' 47.089 W |
| 678.00 | 2.90 | 302.50 | 677.88 | 3.02 | -4.56 | 1,541,834.29 | 3,462,347.24 | 40° 48' 31.551 N | 103° 49' 47.130 W |
| 769.00 | 3.12 | 289.44 | 768.76 | 5.09 | -8.83 | 1,541,836.27 | 3,462,342.93 | 40° 48' 31.572 N | 103° 49' 47.186 W |
| 861.00 | 3.56 | 287.73 | 860.60 | 6.79 | -13.91 | 1,541,837.88 | 3,462,337.81 | 40° 48' 31.589 N | 103° 49' 47.252 W |
| 952.00 | 3.38 | 275.55 | 951.44 | 7.91 | -19.28 | 1,541,838.90 | 3,462,332.43 | 40° 48' 31.600 N | 103° 49' 47.322 W |

LEAM Drilling Systems LLC

Survey Report - Geographic

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
| 1,043.00 | 3.56 | 277.42 | 1,042.27 | 8.53 | -24.75 | 1,541,839.42 | 3,462,326.95 | 40° 48' 31.606 N | 103° 49' 47.393 W |
| 1,135.00 | 3.60 | 279.06 | 1,134.09 | 9.36 | -30.43 | 1,541,840.14 | 3,462,321.25 | 40° 48' 31.614 N | 103° 49' 47.467 W |
| 1,227.00 | 3.60 | 277.58 | 1,225.91 | 10.19 | -36.15 | 1,541,840.87 | 3,462,315.52 | 40° 48' 31.622 N | 103° 49' 47.541 W |
| 1,319.00 | 3.91 | 285.07 | 1,317.71 | 11.39 | -42.04 | 1,541,841.95 | 3,462,309.61 | 40° 48' 31.634 N | 103° 49' 47.618 W |
| 1,410.00 | 4.04 | 289.92 | 1,408.49 | 13.29 | -48.05 | 1,541,843.74 | 3,462,303.56 | 40° 48' 31.653 N | 103° 49' 47.696 W |
| 1,502.00 | 3.82 | 294.72 | 1,500.28 | 15.67 | -53.88 | 1,541,846.01 | 3,462,297.69 | 40° 48' 31.676 N | 103° 49' 47.772 W |
| 1,570.00 | 3.91 | 296.99 | 1,568.12 | 17.67 | -58.00 | 1,541,847.93 | 3,462,293.53 | 40° 48' 31.696 N | 103° 49' 47.825 W |
| 1,662.00 | 3.56 | 288.97 | 1,659.93 | 20.02 | -63.50 | 1,541,850.18 | 3,462,287.99 | 40° 48' 31.719 N | 103° 49' 47.897 W |
| 1,753.00 | 4.13 | 278.44 | 1,750.72 | 21.42 | -69.41 | 1,541,851.47 | 3,462,282.05 | 40° 48' 31.733 N | 103° 49' 47.974 W |
| 1,845.00 | 2.99 | 272.47 | 1,842.54 | 22.01 | -75.09 | 1,541,851.95 | 3,462,276.36 | 40° 48' 31.739 N | 103° 49' 48.048 W |
| 1,936.00 | 2.64 | 255.97 | 1,933.43 | 21.61 | -79.49 | 1,541,851.46 | 3,462,271.97 | 40° 48' 31.735 N | 103° 49' 48.105 W |
| 2,027.00 | 2.73 | 265.63 | 2,024.34 | 20.94 | -83.69 | 1,541,850.71 | 3,462,267.79 | 40° 48' 31.728 N | 103° 49' 48.159 W |
| 2,119.00 | 2.86 | 276.18 | 2,116.23 | 21.02 | -88.15 | 1,541,850.71 | 3,462,263.32 | 40° 48' 31.729 N | 103° 49' 48.218 W |
| 2,211.00 | 2.99 | 256.04 | 2,208.11 | 20.68 | -92.76 | 1,541,850.29 | 3,462,258.72 | 40° 48' 31.726 N | 103° 49' 48.278 W |
| 2,303.00 | 3.38 | 257.57 | 2,299.97 | 19.52 | -97.74 | 1,541,849.03 | 3,462,253.76 | 40° 48' 31.714 N | 103° 49' 48.342 W |
| 2,394.00 | 2.96 | 257.21 | 2,390.83 | 18.42 | -102.65 | 1,541,847.84 | 3,462,248.87 | 40° 48' 31.704 N | 103° 49' 48.406 W |
| 2,486.00 | 2.72 | 259.75 | 2,482.71 | 17.51 | -107.12 | 1,541,846.84 | 3,462,244.43 | 40° 48' 31.694 N | 103° 49' 48.464 W |
| 2,578.00 | 2.86 | 269.77 | 2,574.61 | 17.11 | -111.56 | 1,541,846.36 | 3,462,239.99 | 40° 48' 31.691 N | 103° 49' 48.522 W |
| 2,670.00 | 3.03 | 271.25 | 2,666.48 | 17.16 | -116.29 | 1,541,846.32 | 3,462,235.27 | 40° 48' 31.691 N | 103° 49' 48.583 W |
| 2,762.00 | 3.12 | 281.23 | 2,758.35 | 17.70 | -121.17 | 1,541,846.77 | 3,462,230.37 | 40° 48' 31.696 N | 103° 49' 48.647 W |
| 2,855.00 | 3.92 | 280.40 | 2,851.18 | 18.76 | -126.78 | 1,541,847.73 | 3,462,224.74 | 40° 48' 31.707 N | 103° 49' 48.720 W |
| 2,946.00 | 4.22 | 271.63 | 2,941.95 | 19.42 | -133.19 | 1,541,848.26 | 3,462,218.32 | 40° 48' 31.713 N | 103° 49' 48.803 W |
| 3,038.00 | 4.26 | 269.83 | 3,033.70 | 19.51 | -139.99 | 1,541,848.22 | 3,462,211.52 | 40° 48' 31.714 N | 103° 49' 48.892 W |
| 3,129.00 | 4.01 | 279.93 | 3,124.46 | 20.04 | -146.50 | 1,541,848.64 | 3,462,205.00 | 40° 48' 31.720 N | 103° 49' 48.976 W |
| 3,222.00 | 3.96 | 291.87 | 3,217.24 | 21.80 | -152.69 | 1,541,850.28 | 3,462,198.78 | 40° 48' 31.737 N | 103° 49' 49.057 W |
| 3,314.00 | 4.31 | 290.82 | 3,309.00 | 24.21 | -158.87 | 1,541,852.57 | 3,462,192.56 | 40° 48' 31.761 N | 103° 49' 49.137 W |
| 3,404.00 | 4.01 | 283.04 | 3,398.76 | 26.13 | -165.09 | 1,541,854.37 | 3,462,186.30 | 40° 48' 31.780 N | 103° 49' 49.218 W |
| 3,496.00 | 3.74 | 278.67 | 3,490.55 | 27.30 | -171.19 | 1,541,855.43 | 3,462,180.18 | 40° 48' 31.791 N | 103° 49' 49.297 W |
| 3,588.00 | 4.13 | 277.29 | 3,582.33 | 28.18 | -177.44 | 1,541,856.19 | 3,462,173.91 | 40° 48' 31.800 N | 103° 49' 49.379 W |
| 3,681.00 | 3.74 | 271.76 | 3,675.11 | 28.69 | -183.80 | 1,541,856.58 | 3,462,167.55 | 40° 48' 31.805 N | 103° 49' 49.461 W |
| 3,773.00 | 3.47 | 276.41 | 3,766.93 | 29.10 | -189.56 | 1,541,856.88 | 3,462,161.77 | 40° 48' 31.809 N | 103° 49' 49.536 W |
| 3,866.00 | 3.69 | 271.01 | 3,859.75 | 29.46 | -195.35 | 1,541,857.14 | 3,462,155.98 | 40° 48' 31.813 N | 103° 49' 49.612 W |
| 3,959.00 | 3.65 | 274.88 | 3,952.56 | 29.77 | -201.29 | 1,541,857.33 | 3,462,150.03 | 40° 48' 31.816 N | 103° 49' 49.689 W |
| 4,051.00 | 4.35 | 276.93 | 4,044.34 | 30.44 | -207.68 | 1,541,857.88 | 3,462,143.64 | 40° 48' 31.822 N | 103° 49' 49.772 W |
| 4,143.00 | 3.69 | 275.23 | 4,136.11 | 31.13 | -214.09 | 1,541,858.45 | 3,462,137.22 | 40° 48' 31.829 N | 103° 49' 49.855 W |
| 4,235.00 | 3.49 | 288.84 | 4,227.93 | 32.30 | -219.69 | 1,541,859.52 | 3,462,131.60 | 40° 48' 31.841 N | 103° 49' 49.928 W |
| 4,326.00 | 3.75 | 283.81 | 4,318.75 | 33.91 | -225.20 | 1,541,861.02 | 3,462,126.06 | 40° 48' 31.857 N | 103° 49' 50.000 W |
| 4,419.00 | 3.82 | 280.58 | 4,411.55 | 35.20 | -231.20 | 1,541,862.20 | 3,462,120.03 | 40° 48' 31.869 N | 103° 49' 50.078 W |
| 4,510.00 | 3.82 | 282.01 | 4,502.34 | 36.39 | -237.14 | 1,541,863.27 | 3,462,114.07 | 40° 48' 31.881 N | 103° 49' 50.155 W |
| 4,603.00 | 3.96 | 274.18 | 4,595.13 | 37.27 | -243.37 | 1,541,864.04 | 3,462,107.82 | 40° 48' 31.890 N | 103° 49' 50.236 W |
| 4,695.00 | 3.12 | 271.55 | 4,686.95 | 37.57 | -249.05 | 1,541,864.23 | 3,462,102.14 | 40° 48' 31.893 N | 103° 49' 50.310 W |
| 4,787.00 | 1.76 | 268.43 | 4,778.87 | 37.60 | -252.96 | 1,541,864.18 | 3,462,098.23 | 40° 48' 31.893 N | 103° 49' 50.361 W |
| 4,879.00 | 0.70 | 283.61 | 4,870.85 | 37.69 | -254.92 | 1,541,864.24 | 3,462,096.27 | 40° 48' 31.894 N | 103° 49' 50.386 W |
| 4,970.00 | 0.62 | 286.10 | 4,961.84 | 37.96 | -255.93 | 1,541,864.49 | 3,462,095.25 | 40° 48' 31.897 N | 103° 49' 50.399 W |
| 5,062.00 | 9.67 | 333.04 | 5,053.38 | 45.00 | -259.92 | 1,541,871.45 | 3,462,091.13 | 40° 48' 31.966 N | 103° 49' 50.451 W |
| 5,154.00 | 27.34 | 341.37 | 5,140.29 | 72.12 | -270.26 | 1,541,898.38 | 3,462,080.28 | 40° 48' 32.234 N | 103° 49' 50.586 W |
| 5,185.00 | 34.74 | 339.50 | 5,166.84 | 87.16 | -275.63 | 1,541,913.31 | 3,462,074.63 | 40° 48' 32.383 N | 103° 49' 50.656 W |
| 5,225.00 | 36.97 | 339.96 | 5,199.25 | 109.14 | -283.75 | 1,541,935.14 | 3,462,066.10 | 40° 48' 32.600 N | 103° 49' 50.761 W |
| 5,255.00 | 36.97 | 339.28 | 5,223.22 | 126.05 | -290.03 | 1,541,951.93 | 3,462,059.50 | 40° 48' 32.767 N | 103° 49' 50.843 W |
| 5,286.00 | 37.19 | 338.26 | 5,247.95 | 143.48 | -296.80 | 1,541,969.22 | 3,462,052.41 | 40° 48' 32.939 N | 103° 49' 50.931 W |
| 5,317.00 | 39.82 | 337.59 | 5,272.21 | 161.36 | -304.05 | 1,541,986.96 | 3,462,044.81 | 40° 48' 33.116 N | 103° 49' 51.025 W |
| 5,347.00 | 43.32 | 336.51 | 5,294.65 | 179.68 | -311.82 | 1,542,005.14 | 3,462,036.70 | 40° 48' 33.297 N | 103° 49' 51.126 W |
| 5,378.00 | 43.87 | 336.17 | 5,317.10 | 199.26 | -320.40 | 1,542,024.55 | 3,462,027.76 | 40° 48' 33.490 N | 103° 49' 51.238 W |
| 5,409.00 | 44.60 | 335.95 | 5,339.32 | 219.03 | -329.17 | 1,542,044.15 | 3,462,018.61 | 40° 48' 33.686 N | 103° 49' 51.352 W |
| 5,439.00 | 48.04 | 336.22 | 5,360.03 | 238.86 | -337.97 | 1,542,063.81 | 3,462,009.45 | 40° 48' 33.882 N | 103° 49' 51.466 W |

LEAM Drilling Systems LLC

Survey Report - Geographic

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
| 5,470.00 | 49.49 | 336.56 | 5,380.46 | 260.22 | -347.30 | 1,542,084.99 | 3,461,999.71 | 40° 48' 34.093 N | 103° 49' 51.588 W |
| 5,501.00 | 51.34 | 336.61 | 5,400.22 | 282.14 | -356.80 | 1,542,106.73 | 3,461,989.81 | 40° 48' 34.309 N | 103° 49' 51.711 W |
| 5,532.00 | 52.79 | 337.12 | 5,419.27 | 304.63 | -366.40 | 1,542,129.03 | 3,461,979.78 | 40° 48' 34.531 N | 103° 49' 51.836 W |
| 5,562.00 | 55.64 | 337.01 | 5,436.82 | 327.04 | -375.88 | 1,542,151.25 | 3,461,969.88 | 40° 48' 34.753 N | 103° 49' 51.959 W |
| 5,592.00 | 56.35 | 336.33 | 5,453.59 | 349.87 | -385.73 | 1,542,173.90 | 3,461,959.60 | 40° 48' 34.978 N | 103° 49' 52.087 W |
| 5,623.00 | 58.04 | 336.31 | 5,470.39 | 373.73 | -396.20 | 1,542,197.56 | 3,461,948.69 | 40° 48' 35.214 N | 103° 49' 52.224 W |
| 5,653.00 | 59.09 | 336.80 | 5,486.03 | 397.22 | -406.38 | 1,542,220.85 | 3,461,938.06 | 40° 48' 35.446 N | 103° 49' 52.356 W |
| 5,684.00 | 60.07 | 337.90 | 5,501.73 | 421.89 | -416.67 | 1,542,245.32 | 3,461,927.31 | 40° 48' 35.690 N | 103° 49' 52.490 W |
| 5,714.00 | 60.75 | 339.66 | 5,516.54 | 446.20 | -426.12 | 1,542,269.46 | 3,461,917.41 | 40° 48' 35.930 N | 103° 49' 52.613 W |
| 5,745.00 | 62.18 | 340.78 | 5,531.35 | 471.83 | -435.33 | 1,542,294.90 | 3,461,907.71 | 40° 48' 36.184 N | 103° 49' 52.732 W |
| 5,776.00 | 64.66 | 341.97 | 5,545.22 | 498.10 | -444.18 | 1,542,321.00 | 3,461,898.37 | 40° 48' 36.443 N | 103° 49' 52.848 W |
| 5,808.00 | 68.15 | 341.75 | 5,558.03 | 525.96 | -453.31 | 1,542,348.69 | 3,461,888.72 | 40° 48' 36.718 N | 103° 49' 52.966 W |
| 5,838.00 | 71.87 | 342.33 | 5,568.28 | 552.78 | -462.00 | 1,542,375.34 | 3,461,879.52 | 40° 48' 36.983 N | 103° 49' 53.079 W |
| 5,869.00 | 73.14 | 342.50 | 5,577.60 | 580.96 | -470.93 | 1,542,403.35 | 3,461,870.06 | 40° 48' 37.262 N | 103° 49' 53.195 W |
| 5,900.00 | 73.48 | 342.12 | 5,586.51 | 609.25 | -479.95 | 1,542,431.46 | 3,461,860.51 | 40° 48' 37.541 N | 103° 49' 53.313 W |
| 5,930.00 | 76.18 | 341.80 | 5,594.36 | 636.78 | -488.92 | 1,542,458.82 | 3,461,851.03 | 40° 48' 37.813 N | 103° 49' 53.429 W |
| 5,961.00 | 78.14 | 342.40 | 5,601.24 | 665.54 | -498.21 | 1,542,487.40 | 3,461,841.20 | 40° 48' 38.098 N | 103° 49' 53.550 W |
| 5,992.00 | 79.52 | 342.82 | 5,607.25 | 694.56 | -507.30 | 1,542,516.24 | 3,461,831.56 | 40° 48' 38.384 N | 103° 49' 53.668 W |
| 6,022.00 | 80.07 | 343.05 | 5,612.56 | 722.79 | -515.96 | 1,542,544.30 | 3,461,822.37 | 40° 48' 38.663 N | 103° 49' 53.781 W |
| 6,059.00 | 83.55 | 343.85 | 5,617.84 | 757.89 | -526.39 | 1,542,579.20 | 3,461,811.28 | 40° 48' 39.010 N | 103° 49' 53.917 W |
| 6,159.00 | 88.97 | 347.11 | 5,624.36 | 854.44 | -551.39 | 1,542,675.26 | 3,461,784.47 | 40° 48' 39.964 N | 103° 49' 54.242 W |
| 6,221.00 | 90.02 | 350.50 | 5,624.90 | 915.25 | -563.42 | 1,542,735.83 | 3,461,771.29 | 40° 48' 40.565 N | 103° 49' 54.398 W |
| 6,309.00 | 90.59 | 348.82 | 5,624.44 | 1,001.82 | -579.22 | 1,542,822.08 | 3,461,753.87 | 40° 48' 41.420 N | 103° 49' 54.604 W |
| 6,396.00 | 90.14 | 353.65 | 5,623.88 | 1,087.77 | -592.47 | 1,542,907.78 | 3,461,739.00 | 40° 48' 42.270 N | 103° 49' 54.776 W |
| 6,481.00 | 89.78 | 355.45 | 5,623.94 | 1,172.38 | -600.54 | 1,542,992.22 | 3,461,729.33 | 40° 48' 43.106 N | 103° 49' 54.881 W |
| 6,569.00 | 90.83 | 356.45 | 5,623.47 | 1,260.16 | -606.76 | 1,543,079.87 | 3,461,721.47 | 40° 48' 43.973 N | 103° 49' 54.962 W |
| 6,655.00 | 90.47 | 358.00 | 5,622.50 | 1,346.05 | -610.92 | 1,543,165.66 | 3,461,715.69 | 40° 48' 44.822 N | 103° 49' 55.016 W |
| 6,745.00 | 89.86 | 358.40 | 5,622.24 | 1,436.01 | -613.75 | 1,543,255.55 | 3,461,711.17 | 40° 48' 45.710 N | 103° 49' 55.053 W |
| 6,832.00 | 91.35 | 0.60 | 5,621.32 | 1,522.99 | -614.51 | 1,543,342.50 | 3,461,708.77 | 40° 48' 46.570 N | 103° 49' 55.063 W |
| 6,918.00 | 90.97 | 2.08 | 5,619.58 | 1,608.95 | -612.50 | 1,543,428.48 | 3,461,709.16 | 40° 48' 47.419 N | 103° 49' 55.037 W |
| 7,003.00 | 91.61 | 0.02 | 5,617.66 | 1,693.91 | -610.94 | 1,543,513.46 | 3,461,709.12 | 40° 48' 48.259 N | 103° 49' 55.017 W |
| 7,088.00 | 90.08 | 1.71 | 5,616.41 | 1,778.88 | -609.66 | 1,543,598.44 | 3,461,708.80 | 40° 48' 49.098 N | 103° 49' 55.000 W |
| 7,173.00 | 90.30 | 1.34 | 5,616.13 | 1,863.85 | -607.39 | 1,543,683.44 | 3,461,709.46 | 40° 48' 49.938 N | 103° 49' 54.971 W |
| 7,259.00 | 90.36 | 1.48 | 5,615.63 | 1,949.82 | -605.28 | 1,543,769.43 | 3,461,709.96 | 40° 48' 50.787 N | 103° 49' 54.943 W |
| 7,344.00 | 90.83 | 359.50 | 5,614.75 | 2,034.81 | -604.55 | 1,543,854.42 | 3,461,709.08 | 40° 48' 51.627 N | 103° 49' 54.934 W |
| 7,430.00 | 91.10 | 359.68 | 5,613.30 | 2,120.80 | -605.17 | 1,543,940.38 | 3,461,706.85 | 40° 48' 52.477 N | 103° 49' 54.942 W |
| 7,518.00 | 90.55 | 1.53 | 5,612.03 | 2,208.78 | -604.24 | 1,544,028.36 | 3,461,706.12 | 40° 48' 53.346 N | 103° 49' 54.930 W |
| 7,607.00 | 91.07 | 0.83 | 5,610.78 | 2,297.75 | -602.41 | 1,544,117.35 | 3,461,706.28 | 40° 48' 54.225 N | 103° 49' 54.906 W |
| 7,694.00 | 91.80 | 1.06 | 5,608.60 | 2,384.71 | -600.97 | 1,544,204.32 | 3,461,706.07 | 40° 48' 55.084 N | 103° 49' 54.887 W |
| 7,779.00 | 90.53 | 1.57 | 5,606.87 | 2,469.67 | -599.02 | 1,544,289.30 | 3,461,706.42 | 40° 48' 55.924 N | 103° 49' 54.862 W |
| 7,864.00 | 91.18 | 1.12 | 5,605.60 | 2,554.63 | -597.03 | 1,544,374.29 | 3,461,706.82 | 40° 48' 56.763 N | 103° 49' 54.836 W |
| 7,948.00 | 90.13 | 1.73 | 5,604.64 | 2,638.60 | -594.94 | 1,544,458.28 | 3,461,707.32 | 40° 48' 57.593 N | 103° 49' 54.809 W |
| 8,036.00 | 88.49 | 0.51 | 5,605.70 | 2,726.57 | -593.22 | 1,544,546.27 | 3,461,707.39 | 40° 48' 58.462 N | 103° 49' 54.786 W |
| 8,132.00 | 87.35 | 359.02 | 5,609.18 | 2,822.50 | -593.61 | 1,544,642.18 | 3,461,705.19 | 40° 48' 59.410 N | 103° 49' 54.792 W |
| 8,219.00 | 89.36 | 0.66 | 5,611.68 | 2,909.46 | -593.85 | 1,544,729.12 | 3,461,703.31 | 40° 49' 0.270 N | 103° 49' 54.795 W |
| 8,309.00 | 89.52 | 0.65 | 5,612.56 | 2,999.45 | -592.82 | 1,544,819.11 | 3,461,702.64 | 40° 49' 1.159 N | 103° 49' 54.781 W |
| 8,399.00 | 91.48 | 359.06 | 5,611.78 | 3,089.44 | -593.05 | 1,544,909.08 | 3,461,700.72 | 40° 49' 2.048 N | 103° 49' 54.784 W |
| 8,488.00 | 92.23 | 359.72 | 5,608.90 | 3,178.39 | -594.00 | 1,544,997.99 | 3,461,698.10 | 40° 49' 2.927 N | 103° 49' 54.797 W |
| 8,578.00 | 91.43 | 357.57 | 5,606.02 | 3,268.31 | -596.13 | 1,545,087.86 | 3,461,694.28 | 40° 49' 3.815 N | 103° 49' 54.824 W |
| 8,669.00 | 91.64 | 359.48 | 5,603.58 | 3,359.24 | -598.47 | 1,545,178.73 | 3,461,690.22 | 40° 49' 4.714 N | 103° 49' 54.855 W |
| 8,761.00 | 92.06 | 359.92 | 5,600.61 | 3,451.19 | -598.95 | 1,545,270.66 | 3,461,688.01 | 40° 49' 5.622 N | 103° 49' 54.861 W |
| 8,853.00 | 92.36 | 359.39 | 5,597.07 | 3,543.12 | -599.50 | 1,545,362.56 | 3,461,685.72 | 40° 49' 6.531 N | 103° 49' 54.868 W |
| 8,944.00 | 92.61 | 358.06 | 5,593.12 | 3,634.01 | -601.52 | 1,545,453.40 | 3,461,681.99 | 40° 49' 7.429 N | 103° 49' 54.895 W |
| 9,035.00 | 89.92 | 356.90 | 5,591.11 | 3,724.89 | -605.52 | 1,545,544.18 | 3,461,676.28 | 40° 49' 8.327 N | 103° 49' 54.947 W |
| 9,126.00 | 90.16 | 358.30 | 5,591.05 | 3,815.81 | -609.34 | 1,545,635.01 | 3,461,670.76 | 40° 49' 9.225 N | 103° 49' 54.996 W |

LEAM Drilling Systems LLC

Survey Report - Geographic

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| Survey | | | | | | | | | |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude | Longitude |
| 9,218.00 | 91.11 | 357.27 | 5,590.03 | 3,907.73 | -612.89 | 1,545,726.85 | 3,461,665.47 | 40° 49' 10.133 N | 103° 49' 55.043 W |
| 9,309.00 | 90.66 | 358.97 | 5,588.62 | 3,998.67 | -615.88 | 1,545,817.72 | 3,461,660.77 | 40° 49' 11.032 N | 103° 49' 55.082 W |
| 9,400.00 | 90.20 | 1.47 | 5,587.94 | 4,089.66 | -615.53 | 1,545,908.70 | 3,461,659.41 | 40° 49' 11.931 N | 103° 49' 55.077 W |
| 9,491.00 | 90.50 | 1.68 | 5,587.38 | 4,180.62 | -613.02 | 1,545,999.69 | 3,461,660.20 | 40° 49' 12.830 N | 103° 49' 55.045 W |
| 9,584.00 | 90.00 | 2.53 | 5,586.98 | 4,273.56 | -609.61 | 1,546,092.68 | 3,461,661.86 | 40° 49' 13.748 N | 103° 49' 55.000 W |
| 9,675.00 | 90.30 | 2.97 | 5,586.74 | 4,364.45 | -605.24 | 1,546,183.64 | 3,461,664.51 | 40° 49' 14.646 N | 103° 49' 54.943 W |
| 9,767.00 | 90.25 | 359.24 | 5,586.30 | 4,456.42 | -603.47 | 1,546,275.62 | 3,461,664.56 | 40° 49' 15.555 N | 103° 49' 54.920 W |
| 9,858.00 | 90.63 | 356.95 | 5,585.60 | 4,547.36 | -606.49 | 1,546,366.49 | 3,461,659.82 | 40° 49' 16.453 N | 103° 49' 54.960 W |
| 9,950.00 | 90.14 | 357.29 | 5,584.98 | 4,639.24 | -611.12 | 1,546,458.26 | 3,461,653.47 | 40° 49' 17.361 N | 103° 49' 55.020 W |
| 10,042.00 | 90.21 | 359.74 | 5,584.70 | 4,731.20 | -613.50 | 1,546,550.16 | 3,461,649.35 | 40° 49' 18.270 N | 103° 49' 55.051 W |
| 10,134.00 | 90.41 | 358.93 | 5,584.20 | 4,823.19 | -614.57 | 1,546,642.12 | 3,461,646.55 | 40° 49' 19.179 N | 103° 49' 55.065 W |
| 10,227.00 | 90.47 | 357.62 | 5,583.49 | 4,916.15 | -617.37 | 1,546,735.00 | 3,461,642.00 | 40° 49' 20.097 N | 103° 49' 55.101 W |
| 10,319.00 | 89.11 | 359.24 | 5,583.82 | 5,008.11 | -619.89 | 1,546,826.90 | 3,461,637.75 | 40° 49' 21.006 N | 103° 49' 55.134 W |
| 10,411.00 | 88.06 | 0.58 | 5,586.10 | 5,100.08 | -620.03 | 1,546,918.85 | 3,461,635.87 | 40° 49' 21.915 N | 103° 49' 55.136 W |
| 10,502.00 | 88.24 | 1.31 | 5,589.03 | 5,191.01 | -618.53 | 1,547,009.80 | 3,461,635.66 | 40° 49' 22.813 N | 103° 49' 55.116 W |
| 10,594.00 | 88.74 | 0.88 | 5,591.46 | 5,282.97 | -616.77 | 1,547,101.77 | 3,461,635.68 | 40° 49' 23.722 N | 103° 49' 55.094 W |
| 10,686.00 | 88.93 | 358.88 | 5,593.33 | 5,374.94 | -616.97 | 1,547,193.72 | 3,461,633.76 | 40° 49' 24.631 N | 103° 49' 55.096 W |
| 10,778.00 | 87.90 | 0.14 | 5,595.87 | 5,466.90 | -617.75 | 1,547,285.65 | 3,461,631.24 | 40° 49' 25.539 N | 103° 49' 55.106 W |
| 10,869.00 | 87.41 | 0.48 | 5,599.60 | 5,557.82 | -617.26 | 1,547,376.57 | 3,461,630.02 | 40° 49' 26.438 N | 103° 49' 55.100 W |
| 10,961.00 | 88.66 | 0.96 | 5,602.75 | 5,649.76 | -616.11 | 1,547,468.51 | 3,461,629.44 | 40° 49' 27.346 N | 103° 49' 55.085 W |
| 11,053.00 | 89.26 | 0.80 | 5,604.42 | 5,741.73 | -614.69 | 1,547,560.49 | 3,461,629.12 | 40° 49' 28.255 N | 103° 49' 55.067 W |
| 11,146.00 | 89.65 | 1.24 | 5,605.31 | 5,834.71 | -613.04 | 1,547,653.49 | 3,461,629.03 | 40° 49' 29.174 N | 103° 49' 55.045 W |
| 11,237.00 | 91.11 | 3.13 | 5,604.70 | 5,925.64 | -609.57 | 1,547,744.46 | 3,461,630.78 | 40° 49' 30.072 N | 103° 49' 55.000 W |
| 11,330.00 | 91.33 | 2.36 | 5,602.72 | 6,018.51 | -605.12 | 1,547,837.40 | 3,461,633.49 | 40° 49' 30.990 N | 103° 49' 54.942 W |
| 11,423.00 | 91.95 | 2.75 | 5,600.06 | 6,111.38 | -600.97 | 1,547,930.33 | 3,461,635.88 | 40° 49' 31.907 N | 103° 49' 54.888 W |
| 11,515.00 | 91.21 | 0.25 | 5,597.52 | 6,203.30 | -598.57 | 1,548,022.29 | 3,461,636.56 | 40° 49' 32.816 N | 103° 49' 54.857 W |
| 11,607.00 | 90.93 | 0.42 | 5,595.81 | 6,295.29 | -598.03 | 1,548,114.26 | 3,461,635.36 | 40° 49' 33.724 N | 103° 49' 54.850 W |
| 11,699.00 | 89.06 | 1.56 | 5,595.81 | 6,387.27 | -596.44 | 1,548,206.26 | 3,461,635.22 | 40° 49' 34.633 N | 103° 49' 54.829 W |
| 11,791.00 | 89.58 | 2.17 | 5,596.91 | 6,479.21 | -593.44 | 1,548,298.24 | 3,461,636.48 | 40° 49' 35.542 N | 103° 49' 54.791 W |
| 11,883.00 | 89.12 | 0.54 | 5,597.95 | 6,571.18 | -591.27 | 1,548,390.23 | 3,461,636.92 | 40° 49' 36.450 N | 103° 49' 54.762 W |
| 11,975.00 | 89.49 | 358.95 | 5,599.07 | 6,663.17 | -591.68 | 1,548,482.20 | 3,461,634.78 | 40° 49' 37.359 N | 103° 49' 54.768 W |
| 12,067.00 | 90.12 | 359.90 | 5,599.38 | 6,755.16 | -592.60 | 1,548,574.16 | 3,461,632.12 | 40° 49' 38.268 N | 103° 49' 54.780 W |
| 12,160.00 | 90.58 | 1.17 | 5,598.81 | 6,848.15 | -591.73 | 1,548,667.15 | 3,461,631.24 | 40° 49' 39.187 N | 103° 49' 54.768 W |
| 12,252.00 | 91.15 | 0.07 | 5,597.42 | 6,940.13 | -590.74 | 1,548,759.13 | 3,461,630.50 | 40° 49' 40.096 N | 103° 49' 54.756 W |
| 12,343.00 | 91.79 | 359.37 | 5,595.09 | 7,031.10 | -591.18 | 1,548,850.08 | 3,461,628.35 | 40° 49' 40.995 N | 103° 49' 54.761 W |
| 12,435.00 | 92.48 | 359.42 | 5,591.66 | 7,123.03 | -592.15 | 1,548,941.97 | 3,461,625.64 | 40° 49' 41.903 N | 103° 49' 54.774 W |
| 12,527.00 | 90.71 | 358.18 | 5,589.10 | 7,214.97 | -594.08 | 1,549,033.86 | 3,461,621.99 | 40° 49' 42.812 N | 103° 49' 54.799 W |
| 12,619.00 | 89.61 | 356.99 | 5,588.84 | 7,306.88 | -597.96 | 1,549,125.68 | 3,461,616.38 | 40° 49' 43.720 N | 103° 49' 54.850 W |
| 12,710.00 | 90.26 | 359.29 | 5,588.95 | 7,397.83 | -600.91 | 1,549,216.56 | 3,461,611.71 | 40° 49' 44.618 N | 103° 49' 54.888 W |
| 12,802.00 | 90.16 | 358.74 | 5,588.61 | 7,489.82 | -602.49 | 1,549,308.50 | 3,461,608.40 | 40° 49' 45.527 N | 103° 49' 54.909 W |
| 12,894.00 | 90.66 | 356.82 | 5,587.95 | 7,581.74 | -606.05 | 1,549,400.34 | 3,461,603.11 | 40° 49' 46.436 N | 103° 49' 54.955 W |
| 12,986.00 | 90.33 | 355.58 | 5,587.15 | 7,673.53 | -612.15 | 1,549,492.00 | 3,461,595.28 | 40° 49' 47.343 N | 103° 49' 55.034 W |
| 13,078.00 | 90.18 | 352.87 | 5,586.75 | 7,765.06 | -621.41 | 1,549,583.33 | 3,461,584.30 | 40° 49' 48.247 N | 103° 49' 55.155 W |
| 13,169.00 | 90.54 | 352.88 | 5,586.17 | 7,855.35 | -632.69 | 1,549,673.40 | 3,461,571.32 | 40° 49' 49.139 N | 103° 49' 55.302 W |
| 13,263.00 | 90.51 | 355.85 | 5,585.31 | 7,948.88 | -641.92 | 1,549,766.74 | 3,461,560.33 | 40° 49' 50.063 N | 103° 49' 55.422 W |
| 13,355.00 | 90.80 | 359.15 | 5,584.26 | 8,040.78 | -645.94 | 1,549,858.54 | 3,461,554.59 | 40° 49' 50.971 N | 103° 49' 55.474 W |
| 13,448.00 | 90.60 | 359.12 | 5,583.12 | 8,133.76 | -647.34 | 1,549,951.48 | 3,461,551.43 | 40° 49' 51.890 N | 103° 49' 55.492 W |
| 13,482.00 | 90.41 | 359.42 | 5,582.82 | 8,167.75 | -647.77 | 1,549,985.46 | 3,461,550.36 | 40° 49' 52.226 N | 103° 49' 55.498 W |
| 13,533.00 | 90.41 | 359.42 | 5,582.46 | 8,218.75 | -648.29 | 1,550,036.44 | 3,461,548.88 | 40° 49' 52.730 N | 103° 49' 55.505 W |

LEAM Drilling Systems LLC

Survey Report - Geographic

| | | | |
|------------------|-------------------------------|-------------------------------------|---|
| Company: | WHITING PETROLEUM CORPORATION | Local Co-ordinate Reference: | Well 2309A |
| Project: | Weld County, CO | TVD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Site: | Razor Federal #26J | MD Reference: | GE 4726' + KB 17' @ 4743.00usft (Xtreme 18) |
| Well: | 2309A | North Reference: | True |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | EDM 5000.1 Single User Db |

| Casing Points | | | | | |
|-----------------------|-----------------------|--------|--|---------------------|-------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name | | Casing Diameter (") | Hole Diameter (") |
| 1,555.00 | 1,553.16 | 9 5/8" | | 9-5/8 | 12-1/4 |
| 6,102.00 | 5,621.80 | 7" | | 7 | 7-1/2 |

| Design Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment | |
| | | +N/-S (usft) | +E/-W (usft) | | |
| 13,500.86 | 5,582.69 | 8,186.61 | -647.96 | 100' HL Crossing | |