



Noble Energy Inc.

Weld County, CO

Sec 34, T7N, R64W, 6TH PM

Dyer USX AB35-67-1HN

Wellbore #1

Survey: MWD FINAL

DDC Survey Report

24 April, 2012



| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------|
| Company: | Noble Energy Inc. | Local Co-ordinate Reference: | Well Dyer USX AB35-67-1HN |
| Project: | Weld County, CO | TVD Reference: | WELL @ 4896.0usft (H&P #323) |
| Site: | Sec 34, T7N, R64W, 6TH PM | MD Reference: | WELL @ 4896.0usft (H&P #323) |
| Well: | Dyer USX AB35-67-1HN | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | 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 | | Sec 34, T7N, R64W, 6TH PM | | | |
| Site Position: | | Northing: | | Latitude: | |
| From: | | Easting: | | Longitude: | |
| Position Uncertainty: | | Slot Radius: | | Grid Convergence: | |

| | | |
|----------|-------------------|-------------------|
| Lat/Long | 1,439,590.75 usft | 40° 32' 9.636 N |
| 0.0 usft | 3,270,241.36 usft | 104° 31' 39.792 W |
| | 13-3/16 " | 0.63 ° |

| Well | Dyer USX AB35-67-1HN | | | | | |
|----------------------|----------------------|----------|---------------------|-------------------|---------------|-------------------|
| Well Position | +N-S | 0.0 usft | Northing: | 1,439,590.75 usft | Latitude: | 40° 32' 9.636 N |
| | +E-W | 0.0 usft | Easting: | 3,270,241.36 usft | Longitude: | 104° 31' 39.792 W |
| Position Uncertainty | | 0.0 usft | Wellhead Elevation: | usft | Ground Level: | 4,872.0 usft |

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|-----------|-------------|-------------|-----------------|---------------|---------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 3/19/2012 | 8.65 | 67.17 | 53,147 |

| | | | | | |
|-------------------|----------------------------|----------------|----------------|------------------|-----|
| Design | Wellbore #1 | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N-S (usft) | +E-W (usft) | Direction (°) | |
| | 0.0 | 0.0 | 0.0 | 102.71 | |

| Survey Program | | Date | 4/24/2012 | | |
|----------------|--------------|-------------------|-------------|----------------|--|
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description | |
| 839.0 | 11,707.0 | MWD (Wellbore #1) | MWD default | MWD - Standard | |

| 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) |
| Tie In @ 839' MD / 839' TVD | | | | | | | | | |
| 839.0 | 0.00 | 0.00 | 839.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 879.0 | 1.70 | 347.80 | 879.0 | 0.6 | -0.1 | -0.2 | 4.25 | 4.25 | 0.00 |
| 971.0 | 2.00 | 342.00 | 970.9 | 3.4 | -0.9 | -1.6 | 0.38 | 0.33 | -6.30 |
| 1,063.0 | 1.10 | 130.40 | 1,062.9 | 4.4 | -0.7 | -1.7 | 3.25 | -0.98 | 161.30 |
| 1,155.0 | 1.10 | 117.00 | 1,154.9 | 3.4 | 0.7 | 0.0 | 0.28 | 0.00 | -14.57 |
| 1,250.0 | 3.10 | 168.50 | 1,249.9 | 0.5 | 2.1 | 1.9 | 2.70 | 2.11 | 54.21 |
| 1,345.0 | 4.90 | 179.80 | 1,344.6 | -6.1 | 2.6 | 3.9 | 2.06 | 1.89 | 11.89 |
| 1,440.0 | 7.10 | 181.50 | 1,439.1 | -16.0 | 2.4 | 5.9 | 2.32 | 2.32 | 1.79 |
| 1,534.0 | 9.20 | 178.40 | 1,532.1 | -29.3 | 2.5 | 8.9 | 2.28 | 2.23 | -3.30 |

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|------------------|---------------------------|-------------------------------------|------------------------------|
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| Site: | Sec 34, T7N, R64W, 6TH PM | MD Reference: | WELL @ 4896.0usft (H&P #323) |
| Well: | Dyer USX AB35-67-1HN | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | 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) |
|---|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 1,629.0 | 11.30 | 171.70 | 1,625.6 | -46.1 | 4.1 | 14.1 | 2.54 | 2.21 | -7.05 |
| 1,724.0 | 12.80 | 175.70 | 1,718.5 | -65.8 | 6.2 | 20.5 | 1.81 | 1.58 | 4.21 |
| 1,819.0 | 14.50 | 174.10 | 1,810.8 | -88.2 | 8.2 | 27.4 | 1.83 | 1.79 | -1.68 |
| Crossed Hard Line @ 1836' MD / 1827' TVD | | | | | | | | | |
| 1,836.0 | 14.66 | 172.65 | 1,827.3 | -92.4 | 8.7 | 28.8 | 2.34 | 0.94 | -8.54 |
| 1,914.0 | 15.50 | 166.40 | 1,902.6 | -112.3 | 12.4 | 36.8 | 2.34 | 1.08 | -8.01 |
| 2,009.0 | 16.40 | 170.60 | 1,994.0 | -137.9 | 17.6 | 47.5 | 1.54 | 0.95 | 4.42 |
| 2,104.0 | 18.80 | 171.50 | 2,084.5 | -166.3 | 22.0 | 58.1 | 2.54 | 2.53 | 0.95 |
| 2,199.0 | 19.80 | 170.60 | 2,174.2 | -197.3 | 26.9 | 69.7 | 1.10 | 1.05 | -0.95 |
| 2,294.0 | 19.40 | 171.00 | 2,263.7 | -228.8 | 32.0 | 81.6 | 0.44 | -0.42 | 0.42 |
| 2,388.0 | 18.50 | 176.40 | 2,352.6 | -259.1 | 35.4 | 91.5 | 2.10 | -0.96 | 5.74 |
| 2,483.0 | 19.90 | 174.00 | 2,442.3 | -290.2 | 38.0 | 100.9 | 1.69 | 1.47 | -2.53 |
| 2,578.0 | 18.40 | 176.20 | 2,532.0 | -321.2 | 40.7 | 110.4 | 1.75 | -1.58 | 2.32 |
| 2,673.0 | 17.90 | 174.80 | 2,622.3 | -350.7 | 43.0 | 119.1 | 0.70 | -0.53 | -1.47 |
| 2,768.0 | 19.80 | 170.80 | 2,712.2 | -381.2 | 46.9 | 129.6 | 2.42 | 2.00 | -4.21 |
| 2,863.0 | 19.50 | 172.20 | 2,801.7 | -412.7 | 51.7 | 141.2 | 0.59 | -0.32 | 1.47 |
| 2,958.0 | 19.40 | 169.90 | 2,891.3 | -444.0 | 56.6 | 152.9 | 0.81 | -0.11 | -2.42 |
| 3,053.0 | 19.00 | 172.40 | 2,981.0 | -474.9 | 61.4 | 164.4 | 0.96 | -0.42 | 2.63 |
| 3,148.0 | 19.60 | 173.40 | 3,070.6 | -506.0 | 65.3 | 175.0 | 0.72 | 0.63 | 1.05 |
| 3,243.0 | 20.20 | 174.50 | 3,160.0 | -538.2 | 68.7 | 185.4 | 0.74 | 0.63 | 1.16 |
| 3,337.0 | 19.60 | 171.50 | 3,248.3 | -569.9 | 72.6 | 196.2 | 1.26 | -0.64 | -3.19 |
| 3,432.0 | 20.00 | 174.00 | 3,337.7 | -601.8 | 76.6 | 207.1 | 0.99 | 0.42 | 2.63 |
| 3,527.0 | 20.00 | 173.30 | 3,427.0 | -634.1 | 80.2 | 217.8 | 0.25 | 0.00 | -0.74 |
| 3,622.0 | 17.30 | 172.00 | 3,517.0 | -664.2 | 84.1 | 228.1 | 2.88 | -2.84 | -1.37 |
| 3,717.0 | 16.70 | 169.70 | 3,607.9 | -691.7 | 88.5 | 238.5 | 0.95 | -0.63 | -2.42 |
| 3,812.0 | 17.80 | 168.20 | 3,698.6 | -719.3 | 93.9 | 249.8 | 1.25 | 1.16 | -1.58 |
| 3,908.0 | 18.40 | 168.00 | 3,789.8 | -748.5 | 100.0 | 262.3 | 0.63 | 0.63 | -0.21 |
| 4,003.0 | 21.50 | 172.20 | 3,879.1 | -780.4 | 105.5 | 274.6 | 3.59 | 3.26 | 4.42 |
| 4,098.0 | 22.60 | 178.20 | 3,967.2 | -815.9 | 108.4 | 285.3 | 2.64 | 1.16 | 6.32 |
| 4,193.0 | 21.30 | 176.90 | 4,055.3 | -851.4 | 110.0 | 294.6 | 1.46 | -1.37 | -1.37 |
| 4,288.0 | 19.80 | 175.50 | 4,144.2 | -884.7 | 112.2 | 304.0 | 1.66 | -1.58 | -1.47 |
| 4,383.0 | 18.40 | 176.80 | 4,234.0 | -915.7 | 114.3 | 312.9 | 1.54 | -1.47 | 1.37 |
| 4,478.0 | 18.70 | 174.10 | 4,324.1 | -945.8 | 116.7 | 321.9 | 0.96 | 0.32 | -2.84 |
| 4,573.0 | 18.30 | 172.60 | 4,414.2 | -975.7 | 120.1 | 331.9 | 0.65 | -0.42 | -1.58 |
| 4,668.0 | 19.20 | 172.90 | 4,504.1 | -1,006.0 | 124.0 | 342.3 | 0.95 | 0.95 | 0.32 |
| 4,763.0 | 15.10 | 172.20 | 4,594.9 | -1,033.8 | 127.6 | 351.9 | 4.32 | -4.32 | -0.74 |
| 4,858.0 | 15.30 | 173.10 | 4,686.6 | -1,058.5 | 130.8 | 360.5 | 0.33 | 0.21 | 0.95 |
| 4,953.0 | 13.90 | 175.70 | 4,778.5 | -1,082.3 | 133.1 | 368.0 | 1.63 | -1.47 | 2.74 |
| 5,048.0 | 12.30 | 180.30 | 4,871.0 | -1,103.8 | 134.0 | 373.5 | 2.01 | -1.68 | 4.84 |
| 5,143.0 | 10.30 | 176.90 | 4,964.2 | -1,122.4 | 134.4 | 378.0 | 2.22 | -2.11 | -3.58 |
| 5,238.0 | 8.20 | 167.60 | 5,057.9 | -1,137.5 | 136.3 | 383.2 | 2.71 | -2.21 | -9.79 |
| 5,334.0 | 5.50 | 167.40 | 5,153.2 | -1,148.7 | 138.7 | 388.1 | 2.81 | -2.81 | -0.21 |
| 5,429.0 | 6.70 | 167.80 | 5,247.7 | -1,158.6 | 140.9 | 392.4 | 1.26 | 1.26 | 0.42 |
| 5,524.0 | 4.60 | 165.70 | 5,342.2 | -1,167.7 | 143.0 | 396.4 | 2.22 | -2.21 | -2.21 |

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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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,619.0 | 3.20 | 165.70 | 5,437.0 | -1,173.9 | 144.6 | 399.4 | 1.47 | -1.47 | 0.00 |
| 5,713.0 | 2.40 | 164.80 | 5,530.9 | -1,178.4 | 145.8 | 401.5 | 0.85 | -0.85 | -0.96 |
| 5,808.0 | 2.90 | 170.10 | 5,625.8 | -1,182.7 | 146.7 | 403.3 | 0.59 | 0.53 | 5.58 |
| 5,903.0 | 1.80 | 160.90 | 5,720.7 | -1,186.4 | 147.6 | 405.0 | 1.22 | -1.16 | -9.68 |
| 5,999.0 | 0.60 | 121.10 | 5,816.7 | -1,188.1 | 148.5 | 406.3 | 1.45 | -1.25 | -41.46 |
| 6,094.0 | 0.80 | 66.40 | 5,911.7 | -1,188.1 | 149.6 | 407.3 | 0.70 | 0.21 | -57.58 |
| 6,189.0 | 0.70 | 36.70 | 6,006.7 | -1,187.4 | 150.5 | 408.1 | 0.42 | -0.11 | -31.26 |
| 6,284.0 | 0.80 | 29.80 | 6,101.7 | -1,186.3 | 151.2 | 408.5 | 0.14 | 0.11 | -7.26 |
| 6,324.0 | 1.10 | 52.00 | 6,141.7 | -1,185.9 | 151.6 | 408.8 | 1.17 | 0.75 | 55.50 |
| 6,373.0 | 1.00 | 38.30 | 6,190.7 | -1,185.2 | 152.3 | 409.3 | 0.55 | -0.20 | -27.96 |
| 6,405.0 | 1.70 | 65.20 | 6,222.7 | -1,184.8 | 152.9 | 409.8 | 2.89 | 2.19 | 84.06 |
| 6,437.0 | 4.30 | 78.30 | 6,254.6 | -1,184.4 | 154.5 | 411.3 | 8.35 | 8.13 | 40.94 |
| 6,469.0 | 7.00 | 92.90 | 6,286.5 | -1,184.2 | 157.6 | 414.3 | 9.49 | 8.44 | 45.63 |
| 6,500.0 | 9.50 | 92.60 | 6,317.1 | -1,184.4 | 162.1 | 418.7 | 8.07 | 8.06 | -0.97 |
| 6,532.0 | 11.60 | 90.50 | 6,348.6 | -1,184.6 | 167.9 | 424.4 | 6.67 | 6.56 | -6.56 |
| 6,564.0 | 14.20 | 88.20 | 6,379.8 | -1,184.5 | 175.1 | 431.4 | 8.28 | 8.13 | -7.19 |
| 6,595.0 | 17.10 | 87.70 | 6,409.6 | -1,184.2 | 183.4 | 439.5 | 9.36 | 9.35 | -1.61 |
| 6,627.0 | 20.20 | 90.80 | 6,439.9 | -1,184.1 | 193.6 | 449.4 | 10.17 | 9.69 | 9.69 |
| 6,659.0 | 22.60 | 94.50 | 6,469.7 | -1,184.6 | 205.3 | 460.9 | 8.60 | 7.50 | 11.56 |
| 6,690.0 | 24.70 | 93.60 | 6,498.1 | -1,185.5 | 217.7 | 473.2 | 6.87 | 6.77 | -2.90 |
| 6,722.0 | 27.10 | 93.40 | 6,526.9 | -1,186.4 | 231.7 | 487.0 | 7.50 | 7.50 | -0.63 |
| 6,753.0 | 29.00 | 92.90 | 6,554.3 | -1,187.2 | 246.2 | 501.4 | 6.18 | 6.13 | -1.61 |
| 6,785.0 | 32.00 | 93.60 | 6,581.8 | -1,188.1 | 262.4 | 517.4 | 9.44 | 9.38 | 2.19 |
| 6,817.0 | 35.10 | 96.40 | 6,608.5 | -1,189.7 | 280.0 | 534.9 | 10.83 | 9.69 | 8.75 |
| 6,848.0 | 37.60 | 97.70 | 6,633.5 | -1,191.9 | 298.3 | 553.2 | 8.44 | 8.06 | 4.19 |
| 6,880.0 | 39.80 | 97.50 | 6,658.4 | -1,194.6 | 318.1 | 573.1 | 6.89 | 6.88 | -0.63 |
| 6,912.0 | 42.00 | 95.70 | 6,682.6 | -1,197.0 | 338.9 | 594.0 | 7.80 | 6.88 | -5.63 |
| 6,943.0 | 44.00 | 93.40 | 6,705.3 | -1,198.6 | 360.0 | 614.9 | 8.20 | 6.45 | -7.42 |
| 6,975.0 | 45.80 | 93.60 | 6,728.0 | -1,200.0 | 382.5 | 637.2 | 5.64 | 5.63 | 0.63 |
| 7,007.0 | 47.40 | 93.80 | 6,750.0 | -1,201.5 | 405.7 | 660.1 | 5.02 | 5.00 | 0.63 |
| 7,039.0 | 49.50 | 94.70 | 6,771.2 | -1,203.3 | 429.6 | 683.8 | 6.89 | 6.56 | 2.81 |
| 7,070.0 | 51.70 | 94.70 | 6,790.9 | -1,205.3 | 453.5 | 707.5 | 7.10 | 7.10 | 0.00 |
| 7,102.0 | 54.20 | 93.10 | 6,810.1 | -1,207.0 | 479.0 | 732.8 | 8.77 | 7.81 | -5.00 |
| 7,134.0 | 56.70 | 91.50 | 6,828.3 | -1,208.0 | 505.3 | 758.7 | 8.83 | 7.81 | -5.00 |
| 7,165.0 | 58.50 | 89.60 | 6,844.9 | -1,208.3 | 531.5 | 784.3 | 7.78 | 5.81 | -6.13 |
| 7,197.0 | 60.70 | 89.60 | 6,861.1 | -1,208.1 | 559.1 | 811.2 | 6.88 | 6.88 | 0.00 |
| 7,229.0 | 63.60 | 91.20 | 6,876.0 | -1,208.3 | 587.3 | 838.8 | 10.08 | 9.06 | 5.00 |
| 7,260.0 | 66.70 | 91.50 | 6,889.1 | -1,209.0 | 615.5 | 866.4 | 10.04 | 10.00 | 0.97 |
| 7,292.0 | 69.40 | 92.90 | 6,901.0 | -1,210.1 | 645.1 | 895.5 | 9.36 | 8.44 | 4.38 |
| 7,324.0 | 72.00 | 92.40 | 6,911.6 | -1,211.5 | 675.3 | 925.3 | 8.26 | 8.13 | -1.56 |
| 7,355.0 | 74.60 | 91.70 | 6,920.5 | -1,212.6 | 705.0 | 954.5 | 8.66 | 8.39 | -2.26 |
| 7,387.0 | 76.70 | 92.40 | 6,928.4 | -1,213.7 | 735.9 | 984.9 | 6.90 | 6.56 | 2.19 |
| 7,419.0 | 78.70 | 90.30 | 6,935.3 | -1,214.4 | 767.2 | 1,015.6 | 8.95 | 6.25 | -6.56 |

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|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 7,449.0 | 80.90 | 88.00 | 6,940.6 | -1,214.0 | 796.7 | 1,044.3 | 10.52 | 7.33 | -7.67 |
| 7,521.0 | 84.40 | 90.30 | 6,949.8 | -1,212.9 | 868.1 | 1,113.7 | 5.80 | 4.86 | 3.19 |
| 7,552.0 | 85.20 | 91.00 | 6,952.6 | -1,213.3 | 899.0 | 1,143.9 | 3.42 | 2.58 | 2.26 |
| 7,616.0 | 86.80 | 91.20 | 6,957.1 | -1,214.5 | 962.8 | 1,206.4 | 2.52 | 2.50 | 0.31 |
| 7,647.0 | 87.10 | 90.80 | 6,958.7 | -1,215.0 | 993.7 | 1,236.7 | 1.61 | 0.97 | -1.29 |
| 7,679.0 | 88.40 | 90.30 | 6,960.0 | -1,215.3 | 1,025.7 | 1,268.0 | 4.35 | 4.06 | -1.56 |
| 7,742.0 | 90.20 | 89.60 | 6,960.7 | -1,215.3 | 1,088.7 | 1,329.4 | 3.07 | 2.86 | -1.11 |
| 7,837.0 | 90.50 | 89.60 | 6,960.1 | -1,214.6 | 1,183.7 | 1,421.9 | 0.32 | 0.32 | 0.00 |
| 7,932.0 | 90.00 | 88.30 | 6,959.7 | -1,212.9 | 1,278.7 | 1,514.2 | 1.47 | -0.53 | -1.37 |
| 8,027.0 | 90.80 | 88.70 | 6,959.1 | -1,210.4 | 1,373.6 | 1,606.3 | 0.94 | 0.84 | 0.42 |
| 8,122.0 | 90.80 | 89.60 | 6,957.7 | -1,209.0 | 1,468.6 | 1,698.6 | 0.95 | 0.00 | 0.95 |
| 8,217.0 | 92.10 | 90.30 | 6,955.3 | -1,208.9 | 1,563.6 | 1,791.3 | 1.55 | 1.37 | 0.74 |
| 8,313.0 | 91.50 | 90.60 | 6,952.3 | -1,209.6 | 1,659.5 | 1,885.0 | 0.70 | -0.63 | 0.31 |
| 8,407.0 | 90.50 | 91.30 | 6,950.7 | -1,211.2 | 1,753.5 | 1,977.0 | 1.30 | -1.06 | 0.74 |
| 8,502.0 | 89.80 | 89.10 | 6,950.4 | -1,211.5 | 1,848.5 | 2,069.8 | 2.43 | -0.74 | -2.32 |
| 8,597.0 | 90.20 | 88.70 | 6,950.4 | -1,209.7 | 1,943.5 | 2,162.0 | 0.60 | 0.42 | -0.42 |
| 8,692.0 | 89.70 | 88.20 | 6,950.5 | -1,207.1 | 2,038.5 | 2,254.1 | 0.74 | -0.53 | -0.53 |
| 8,787.0 | 90.60 | 88.70 | 6,950.3 | -1,204.6 | 2,133.4 | 2,346.2 | 1.08 | 0.95 | 0.53 |
| 8,882.0 | 90.30 | 87.80 | 6,949.5 | -1,201.7 | 2,228.4 | 2,438.1 | 1.00 | -0.32 | -0.95 |
| 8,977.0 | 90.00 | 87.30 | 6,949.3 | -1,197.6 | 2,323.3 | 2,529.8 | 0.61 | -0.32 | -0.53 |
| 9,073.0 | 89.70 | 86.40 | 6,949.5 | -1,192.3 | 2,419.1 | 2,622.2 | 0.99 | -0.31 | -0.94 |
| 9,168.0 | 90.00 | 87.50 | 6,949.8 | -1,187.3 | 2,514.0 | 2,713.6 | 1.20 | 0.32 | 1.16 |
| 9,263.0 | 90.00 | 86.10 | 6,949.8 | -1,182.0 | 2,608.8 | 2,805.0 | 1.47 | 0.00 | -1.47 |
| 9,358.0 | 91.80 | 89.40 | 6,948.3 | -1,178.2 | 2,703.7 | 2,896.7 | 3.96 | 1.89 | 3.47 |
| 9,453.0 | 92.20 | 88.90 | 6,945.0 | -1,176.8 | 2,798.7 | 2,989.0 | 0.67 | 0.42 | -0.53 |
| 9,548.0 | 89.20 | 90.10 | 6,943.8 | -1,176.0 | 2,893.7 | 3,081.5 | 3.40 | -3.16 | 1.26 |
| 9,642.0 | 90.10 | 89.90 | 6,944.4 | -1,176.0 | 2,987.6 | 3,173.2 | 0.98 | 0.96 | -0.21 |
| 9,737.0 | 90.20 | 87.30 | 6,944.1 | -1,173.7 | 3,082.6 | 3,265.3 | 2.74 | 0.11 | -2.74 |
| 9,832.0 | 89.50 | 85.20 | 6,944.4 | -1,167.5 | 3,177.4 | 3,356.4 | 2.33 | -0.74 | -2.21 |
| 9,927.0 | 88.60 | 84.50 | 6,946.0 | -1,159.0 | 3,272.0 | 3,446.8 | 1.20 | -0.95 | -0.74 |
| 9,991.0 | 89.40 | 86.90 | 6,947.1 | -1,154.2 | 3,335.8 | 3,508.0 | 3.95 | 1.25 | 3.75 |
| 10,022.0 | 90.30 | 88.30 | 6,947.2 | -1,152.9 | 3,366.8 | 3,537.9 | 5.37 | 2.90 | 4.52 |
| 10,117.0 | 91.40 | 89.90 | 6,945.7 | -1,151.4 | 3,461.8 | 3,630.2 | 2.04 | 1.16 | 1.68 |
| 10,212.0 | 91.50 | 90.60 | 6,943.3 | -1,151.8 | 3,556.7 | 3,723.0 | 0.74 | 0.11 | 0.74 |
| 10,307.0 | 91.60 | 89.60 | 6,940.8 | -1,151.9 | 3,651.7 | 3,815.7 | 1.06 | 0.11 | -1.05 |
| 10,402.0 | 91.20 | 89.60 | 6,938.4 | -1,151.3 | 3,746.7 | 3,908.1 | 0.42 | -0.42 | 0.00 |
| 10,497.0 | 89.50 | 92.20 | 6,937.9 | -1,152.8 | 3,841.6 | 4,001.1 | 3.27 | -1.79 | 2.74 |
| 10,592.0 | 89.20 | 95.00 | 6,938.9 | -1,158.7 | 3,936.4 | 4,094.9 | 2.96 | -0.32 | 2.95 |
| 10,687.0 | 88.90 | 93.30 | 6,940.5 | -1,165.6 | 4,031.2 | 4,188.8 | 1.82 | -0.32 | -1.79 |
| 10,782.0 | 88.00 | 90.60 | 6,943.1 | -1,168.8 | 4,126.1 | 4,282.1 | 2.99 | -0.95 | -2.84 |
| 10,877.0 | 88.00 | 88.70 | 6,946.4 | -1,168.3 | 4,221.0 | 4,374.6 | 2.00 | 0.00 | -2.00 |
| 10,973.0 | 89.00 | 86.60 | 6,948.9 | -1,164.3 | 4,316.9 | 4,467.3 | 2.42 | 1.04 | -2.19 |
| 11,068.0 | 91.60 | 85.20 | 6,948.4 | -1,157.5 | 4,411.6 | 4,558.2 | 3.11 | 2.74 | -1.47 |
| 11,163.0 | 91.00 | 86.10 | 6,946.3 | -1,150.3 | 4,506.3 | 4,649.0 | 1.14 | -0.63 | 0.95 |

| | | | |
|------------------|---------------------------|-------------------------------------|------------------------------|
| Company: | Noble Energy Inc. | Local Co-ordinate Reference: | Well Dyer USX AB35-67-1HN |
| Project: | Weld County, CO | TVD Reference: | WELL @ 4896.0usft (H&P #323) |
| Site: | Sec 34, T7N, R64W, 6TH PM | MD Reference: | WELL @ 4896.0usft (H&P #323) |
| Well: | Dyer USX AB35-67-1HN | North Reference: | Grid |
| Wellbore: | Wellbore #1 | Survey Calculation Method: | Minimum Curvature |
| Design: | Wellbore #1 | 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) |
| 11,258.0 | 90.70 | 85.40 | 6,944.9 | -1,143.3 | 4,601.0 | 4,739.8 | 0.80 | -0.32 | -0.74 |
| 11,353.0 | 92.30 | 85.70 | 6,942.4 | -1,135.9 | 4,695.7 | 4,830.6 | 1.71 | 1.68 | 0.32 |
| 11,448.0 | 92.90 | 86.10 | 6,938.1 | -1,129.1 | 4,790.4 | 4,921.4 | 0.76 | 0.63 | 0.42 |
| 11,543.0 | 91.80 | 87.10 | 6,934.2 | -1,123.5 | 4,885.1 | 5,012.6 | 1.56 | -1.16 | 1.05 |
| 11,638.0 | 90.80 | 87.30 | 6,932.0 | -1,118.9 | 4,980.0 | 5,104.1 | 1.07 | -1.05 | 0.21 |
| 11,656.0 | 90.90 | 88.00 | 6,931.7 | -1,118.1 | 4,998.0 | 5,121.5 | 3.93 | 0.56 | 3.89 |
| TD @ 11707' MD / 6931' TVD | | | | | | | | | |
| 11,707.0 | 90.90 | 88.00 | 6,930.9 | -1,116.4 | 5,048.9 | 5,170.8 | 0.00 | 0.00 | 0.00 |

| Survey Annotations | | | | |
|-----------------------|-----------------------|-------------------|--------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
| | | +N/-S (usft) | +E/-W (usft) | |
| 839.0 | 839.0 | 0.0 | 0.0 | Tie In @ 839' MD / 839' TVD |
| 1,836.0 | 1,827.3 | -92.4 | 8.7 | Crossed Hard Line @ 1836' MD / 1827' TVD |
| 11,707.0 | 6,930.9 | -1,116.4 | 5,048.9 | TD @ 11707' MD / 6931' TVD |

Checked By: _____ Approved By: _____ Date: _____



Survey Certification Sheet

Noble Energy
Company

RM-12172
Job Number

4/24/12
Date

Sec 34, T7N, R64W, 6th PM
Lease

Dyer USX AB35-67-1HN
Well Name

Weld, CO
County & State

Surveyed from a depth of: 839 feet to 11707 feet MD

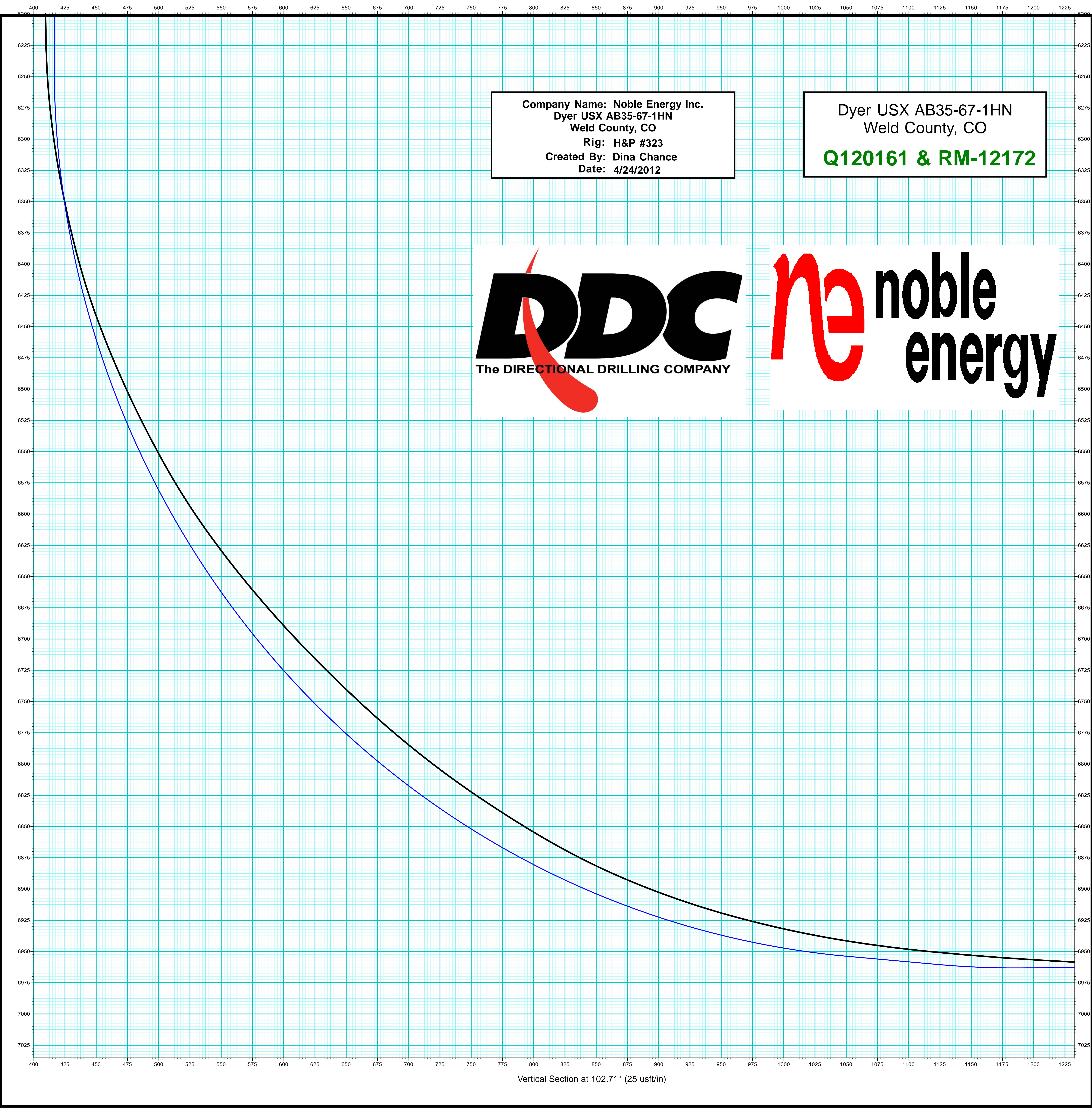
Type of Survey: MWD

Directional Supervisor/Surveyor: Boyd Wolff

The data and calculations for this survey have been checked by me and conform to the standards and procedures set forth by **The Directional Drilling Company (DDC)**. This report represents a true and correct Directional survey of this well based on the original data obtained at the well site. Wellbore Coordinates are calculated using minimum curvature.

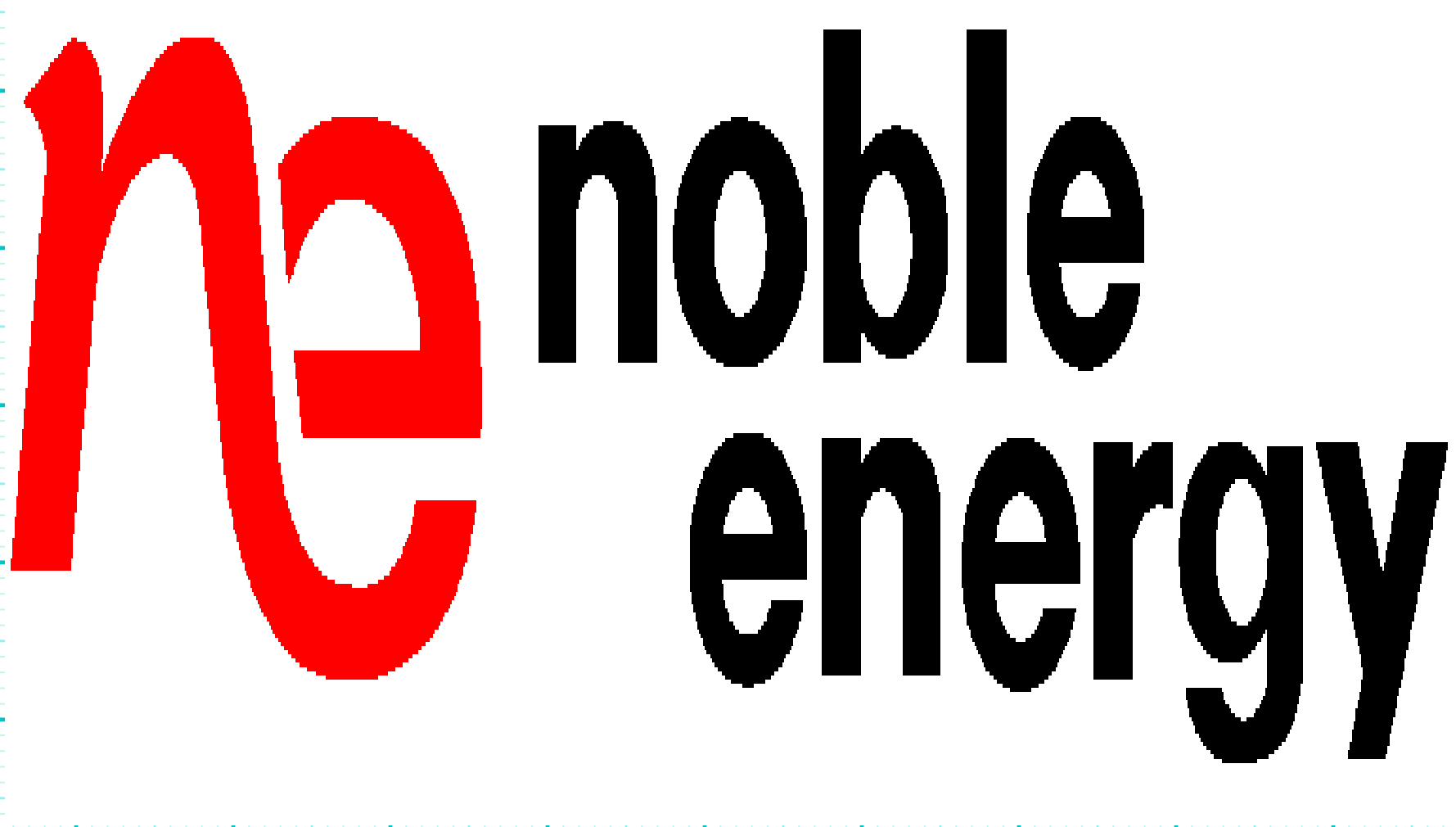
Digitally signed by Larry Wright
DN: cn=Larry Wright, o=The
Directional Drilling Company,
ou=GM of Guidance Services,
email=larryw@directionaldrillers
.com, c=US
Date: 2012.04.25 15:27:47 -05'00'

Larry Wright
MWD General Manager



Company Name: Noble Energy Inc.
Dyer USX AB35-67-1HN
Weld County, CO
Rig: H&P #323
Created By: Dina Chance
Date: 4/24/2012

Dyer USX AB35-67-1HN
Weld County, CO
Q120161 & RM-12172



Vertical Section at 102.71° (25 usft/in)

Company Name: Noble Energy Inc.
Dyer USX AB35-67-1HN
Weld County, CO
Rig: H&P #323
Created By: Dina Chance
Date: 4/24/2012

Dyer USX AB35-67-1HN
Weld County, CO
Q120161 & RM-12172



T

G

M

Azimuths to Grid North

Magnetic North: 8.02°

Magnetic Field Strength: 53147.0snT

Dip Angle: 67.17°

Date: 3/19/2012

Model: IGRF2010

