

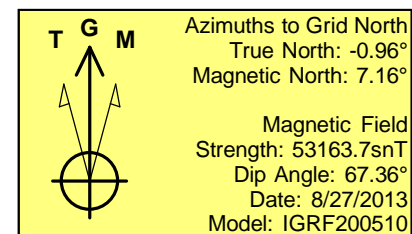
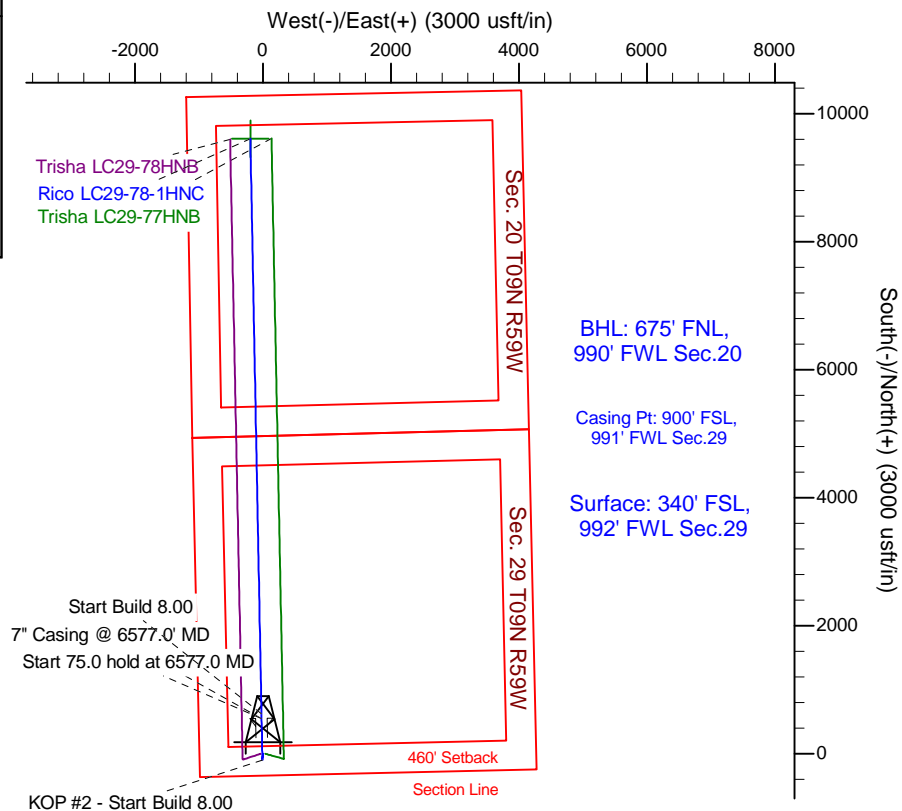
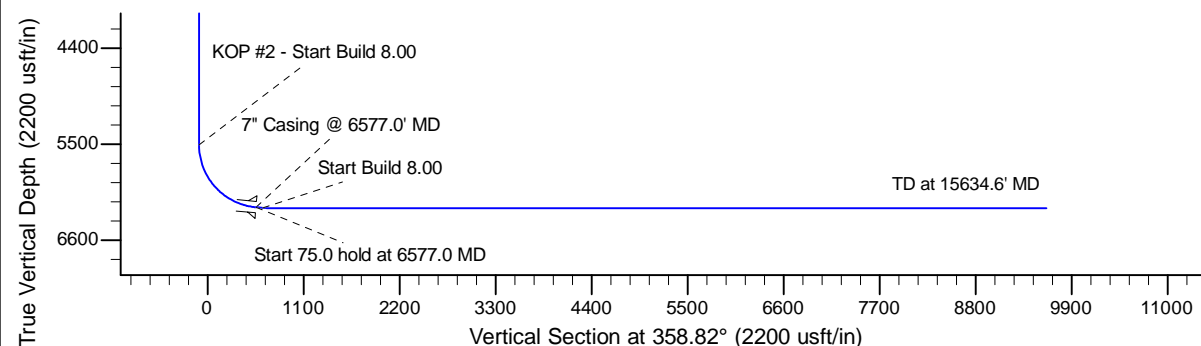
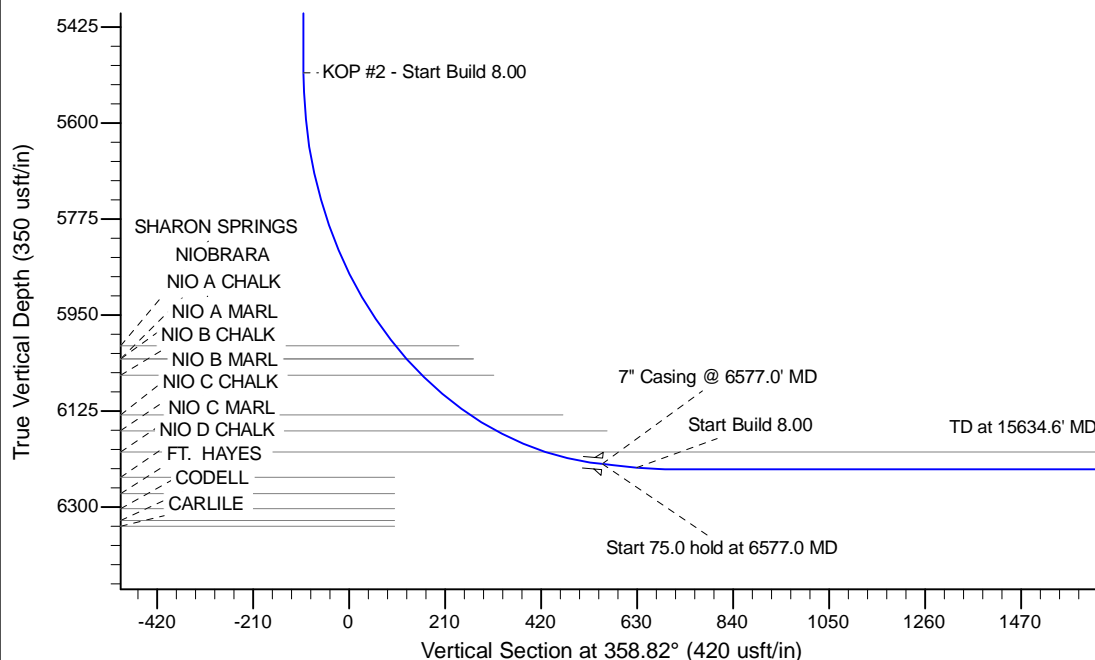
Project: Wattenberg Field
 Site: LC (Sec.29-T09N-R59W) Weld County, CO
 Well: Rico LC29-78-1HNC
 Wellbore: Original Drilling
 Design: APD - Rev 0

Northern Region Drilling - Working

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

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSec | Target |
|-----|---------|-------|--------|--------|--------|--------|------|--------|--------|--|
| 1 | 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 2 | 1800.0 | 0.00 | 0.00 | 1800.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 2309.1 | 10.18 | 185.71 | 2306.4 | -44.9 | -4.5 | 2.00 | 185.71 | -44.8 | |
| 4 | 2367.2 | 10.18 | 185.71 | 2363.6 | -55.1 | -5.5 | 0.00 | 0.00 | -55.0 | |
| 5 | 2876.3 | 0.00 | 0.00 | 2870.0 | -100.0 | -10.0 | 2.00 | 180.00 | -99.8 | |
| 6 | 5514.5 | 0.00 | 0.00 | 5508.3 | -100.0 | -10.0 | 0.00 | 0.00 | -99.8 | |
| 7 | 6577.0 | 85.00 | 358.89 | 6221.7 | 553.7 | -22.6 | 8.00 | 358.89 | 554.0 | |
| 8 | 6652.0 | 85.00 | 358.89 | 6228.3 | 628.4 | -24.1 | 0.00 | 0.00 | 628.7 | |
| 9 | 6714.5 | 90.00 | 358.89 | 6231.0 | 690.8 | -25.3 | 8.00 | 0.00 | 691.1 | |
| 10 | 15634.6 | 90.00 | 358.89 | 6231.0 | 9609.1 | -197.7 | 0.00 | 0.00 | 9611.2 | Rico LC29-78-1HNC BHL 675'FNL, 990'FWL |



| WELL DETAILS: Rico LC29-78-1HNC | | | | | |
|---|-----|------------|-----------------------------|-----------|-------------|
| Ground Level: 4882.0 | | | | | |
| 0.0 | 0.0 | 1506762.53 | 3413648.67 | 40.714900 | -104.007780 |
| Plan: APD - Rev 0 (Rico LC29-78-1HNC/Original Drilling) | | | | | |
| Created By: Shailey Jewell | | | Date: 11:48, August 28 2013 | | |
| Checked: _____ | | | Date: _____ | | |
| Reviewed: _____ | | | Date: _____ | | |
| Approved: _____ | | | Date: _____ | | |

Northern Region Drilling - Working

Wattenberg Field

LC (09N-59W)

Rico LC29-78-1HNC

Original Drilling

Plan: APD - Rev 0

Standard Planning Report

28 August, 2013

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| | | | |
|--------------------|----------------------------------|----------------------|-----------------------------|
| Project | Wattenberg Field, 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 | | Using geodetic scale factor |

| | | | | |
|------------------------------|--------------|---------------------|-------------------|---------------------------------|
| Site | LC (09N-59W) | | | |
| Site Position: | | Northing: | 1,527,709.69 usft | Latitude: 40.771436 |
| From: | Lat/Long | Easting: | 3,433,728.00 usft | Longitude: -103.934025 |
| Position Uncertainty: | 0.0 usft | Slot Radius: | 13-3/16 " | Grid Convergence: 1.01 ° |

| | | | | |
|-----------------------------|-------------------|----------------------------|------------------|-----------------------------------|
| Well | Rico LC29-78-1HNC | | | |
| Well Position | +N/-S | -20,947.2 usft | Northing: | 1,506,762.53 usft |
| | +E/-W | -20,079.4 usft | Easting: | 3,413,648.66 usft |
| Position Uncertainty | 0.0 usft | Wellhead Elevation: | | Ground Level: 4,882.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Original Drilling | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 8/27/2013 | 8.12 | 67.36 | 53,164 |

| | | | | |
|--------------------------|--------------------------------|---------------------|----------------------|----------------------|
| Design | APD - Rev 0 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 358.82 |

| 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 | |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,309.1 | 10.18 | 185.71 | 2,306.4 | -44.9 | -4.5 | 2.00 | 2.00 | 0.00 | 185.71 | |
| 2,367.2 | 10.18 | 185.71 | 2,363.6 | -55.1 | -5.5 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,876.3 | 0.00 | 0.00 | 2,870.0 | -100.0 | -10.0 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 5,514.5 | 0.00 | 0.00 | 5,508.3 | -100.0 | -10.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,577.0 | 85.00 | 358.89 | 6,221.7 | 553.7 | -22.6 | 8.00 | 8.00 | 0.00 | 358.89 | |
| 6,652.0 | 85.00 | 358.89 | 6,228.3 | 628.4 | -24.1 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,714.5 | 90.00 | 358.89 | 6,231.0 | 690.8 | -25.3 | 8.00 | 8.00 | 0.00 | 0.00 | |
| 15,634.6 | 90.00 | 358.89 | 6,231.0 | 9,609.1 | -197.7 | 0.00 | 0.00 | 0.00 | 0.00 | Rico LC29-78-1HNC I |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| 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 |
| 50.0 | 0.00 | 0.00 | 50.0 | 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 |
| 150.0 | 0.00 | 0.00 | 150.0 | 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 |
| 250.0 | 0.00 | 0.00 | 250.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 300.0 | 0.00 | 0.00 | 300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 350.0 | 0.00 | 0.00 | 350.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 400.0 | 0.00 | 0.00 | 400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 450.0 | 0.00 | 0.00 | 450.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 500.0 | 0.00 | 0.00 | 500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 550.0 | 0.00 | 0.00 | 550.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 600.0 | 0.00 | 0.00 | 600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 650.0 | 0.00 | 0.00 | 650.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 700.0 | 0.00 | 0.00 | 700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 750.0 | 0.00 | 0.00 | 750.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 850.0 | 0.00 | 0.00 | 850.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 900.0 | 0.00 | 0.00 | 900.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 950.0 | 0.00 | 0.00 | 950.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,000.0 | 0.00 | 0.00 | 1,000.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,050.0 | 0.00 | 0.00 | 1,050.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,100.0 | 0.00 | 0.00 | 1,100.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,150.0 | 0.00 | 0.00 | 1,150.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,200.0 | 0.00 | 0.00 | 1,200.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,250.0 | 0.00 | 0.00 | 1,250.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,300.0 | 0.00 | 0.00 | 1,300.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,350.0 | 0.00 | 0.00 | 1,350.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,374.0 | 0.00 | 0.00 | 1,374.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| PIERRE | | | | | | | | | |
| 1,400.0 | 0.00 | 0.00 | 1,400.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,450.0 | 0.00 | 0.00 | 1,450.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,550.0 | 0.00 | 0.00 | 1,550.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,600.0 | 0.00 | 0.00 | 1,600.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,650.0 | 0.00 | 0.00 | 1,650.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,700.0 | 0.00 | 0.00 | 1,700.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,750.0 | 0.00 | 0.00 | 1,750.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 0.00 | 0.00 | 1,800.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| KOP - Start Build 2.00 | | | | | | | | | |
| 1,850.0 | 1.00 | 185.71 | 1,850.0 | -0.4 | 0.0 | -0.4 | 2.00 | 2.00 | 0.00 |
| 1,900.0 | 2.00 | 185.71 | 1,900.0 | -1.7 | -0.2 | -1.7 | 2.00 | 2.00 | 0.00 |
| 1,950.0 | 3.00 | 185.71 | 1,949.9 | -3.9 | -0.4 | -3.9 | 2.00 | 2.00 | 0.00 |
| 2,000.0 | 4.00 | 185.71 | 1,999.8 | -6.9 | -0.7 | -6.9 | 2.00 | 2.00 | 0.00 |
| 2,050.0 | 5.00 | 185.71 | 2,049.7 | -10.8 | -1.1 | -10.8 | 2.00 | 2.00 | 0.00 |
| 2,100.0 | 6.00 | 185.71 | 2,099.5 | -15.6 | -1.6 | -15.6 | 2.00 | 2.00 | 0.00 |
| 2,150.0 | 7.00 | 185.71 | 2,149.1 | -21.2 | -2.1 | -21.2 | 2.00 | 2.00 | 0.00 |
| 2,200.0 | 8.00 | 185.71 | 2,198.7 | -27.7 | -2.8 | -27.7 | 2.00 | 2.00 | 0.00 |
| 2,250.0 | 9.00 | 185.71 | 2,248.2 | -35.1 | -3.5 | -35.0 | 2.00 | 2.00 | 0.00 |
| 2,300.0 | 10.00 | 185.71 | 2,297.5 | -43.3 | -4.3 | -43.2 | 2.00 | 2.00 | 0.00 |
| 2,309.1 | 10.18 | 185.71 | 2,306.4 | -44.9 | -4.5 | -44.8 | 2.00 | 2.00 | 0.00 |
| 2,350.0 | 10.18 | 185.71 | 2,346.7 | -52.1 | -5.2 | -52.0 | 0.00 | 0.00 | 0.00 |
| 2,367.2 | 10.18 | 185.71 | 2,363.6 | -55.1 | -5.5 | -55.0 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| 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) |
| Start Drop -2.00 | | | | | | | | | |
| 2,400.0 | 9.53 | 185.71 | 2,395.9 | -60.7 | -6.1 | -60.6 | 2.00 | -2.00 | 0.00 |
| 2,450.0 | 8.53 | 185.71 | 2,445.3 | -68.5 | -6.9 | -68.3 | 2.00 | -2.00 | 0.00 |
| 2,500.0 | 7.53 | 185.71 | 2,494.8 | -75.4 | -7.5 | -75.3 | 2.00 | -2.00 | 0.00 |
| 2,550.0 | 6.53 | 185.71 | 2,544.4 | -81.5 | -8.2 | -81.3 | 2.00 | -2.00 | 0.00 |
| 2,600.0 | 5.53 | 185.71 | 2,594.2 | -86.8 | -8.7 | -86.6 | 2.00 | -2.00 | 0.00 |
| 2,650.0 | 4.53 | 185.71 | 2,644.0 | -91.1 | -9.1 | -90.9 | 2.00 | -2.00 | 0.00 |
| 2,700.0 | 3.53 | 185.71 | 2,693.8 | -94.6 | -9.5 | -94.4 | 2.00 | -2.00 | 0.00 |
| 2,750.0 | 2.53 | 185.71 | 2,743.8 | -97.2 | -9.7 | -97.0 | 2.00 | -2.00 | 0.00 |
| 2,800.0 | 1.53 | 185.71 | 2,793.7 | -99.0 | -9.9 | -98.8 | 2.00 | -2.00 | 0.00 |
| 2,850.0 | 0.53 | 185.71 | 2,843.7 | -99.9 | -10.0 | -99.7 | 2.00 | -2.00 | 0.00 |
| 2,876.3 | 0.00 | 0.00 | 2,870.0 | -100.0 | -10.0 | -99.8 | 2.00 | -2.00 | 0.00 |
| 2,900.0 | 0.00 | 0.00 | 2,893.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 2,950.0 | 0.00 | 0.00 | 2,943.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 0.00 | 0.00 | 2,993.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,050.0 | 0.00 | 0.00 | 3,043.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 0.00 | 0.00 | 3,093.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,150.0 | 0.00 | 0.00 | 3,143.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 0.00 | 0.00 | 3,193.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,250.0 | 0.00 | 0.00 | 3,243.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 0.00 | 0.00 | 3,293.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,350.0 | 0.00 | 0.00 | 3,343.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 0.00 | 0.00 | 3,393.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,450.0 | 0.00 | 0.00 | 3,443.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,478.3 | 0.00 | 0.00 | 3,472.0 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| PARKMAN | | | | | | | | | |
| 3,500.0 | 0.00 | 0.00 | 3,493.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,550.0 | 0.00 | 0.00 | 3,543.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 0.00 | 0.00 | 3,593.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,650.0 | 0.00 | 0.00 | 3,643.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 0.00 | 0.00 | 3,693.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,750.0 | 0.00 | 0.00 | 3,743.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 0.00 | 0.00 | 3,793.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,850.0 | 0.00 | 0.00 | 3,843.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 0.00 | 0.00 | 3,893.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 3,950.0 | 0.00 | 0.00 | 3,943.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 0.00 | 0.00 | 3,993.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,050.0 | 0.00 | 0.00 | 4,043.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 0.00 | 0.00 | 4,093.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,150.0 | 0.00 | 0.00 | 4,143.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,191.3 | 0.00 | 0.00 | 4,185.0 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| SUSSEX | | | | | | | | | |
| 4,200.0 | 0.00 | 0.00 | 4,193.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,250.0 | 0.00 | 0.00 | 4,243.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 0.00 | 0.00 | 4,293.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,350.0 | 0.00 | 0.00 | 4,343.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 0.00 | 0.00 | 4,393.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,450.0 | 0.00 | 0.00 | 4,443.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 0.00 | 0.00 | 4,493.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,550.0 | 0.00 | 0.00 | 4,543.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,596.3 | 0.00 | 0.00 | 4,590.0 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| SHANNON | | | | | | | | | |
| 4,600.0 | 0.00 | 0.00 | 4,593.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|---------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 4,650.0 | 0.00 | 0.00 | 4,643.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 0.00 | 0.00 | 4,693.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,750.0 | 0.00 | 0.00 | 4,743.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 0.00 | 0.00 | 4,793.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,850.0 | 0.00 | 0.00 | 4,843.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 0.00 | 0.00 | 4,893.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 4,950.0 | 0.00 | 0.00 | 4,943.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 0.00 | 0.00 | 4,993.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,050.0 | 0.00 | 0.00 | 5,043.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 0.00 | 0.00 | 5,093.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,150.0 | 0.00 | 0.00 | 5,143.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 0.00 | 0.00 | 5,193.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,250.0 | 0.00 | 0.00 | 5,243.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 0.00 | 0.00 | 5,293.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,350.0 | 0.00 | 0.00 | 5,343.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,376.3 | 0.00 | 0.00 | 5,370.0 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| TEEPEE BUTTES | | | | | | | | | |
| 5,400.0 | 0.00 | 0.00 | 5,393.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,450.0 | 0.00 | 0.00 | 5,443.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,500.0 | 0.00 | 0.00 | 5,493.7 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| 5,514.5 | 0.00 | 0.00 | 5,508.2 | -100.0 | -10.0 | -99.8 | 0.00 | 0.00 | 0.00 |
| KOP #2 - Start Build 8.00 | | | | | | | | | |
| 5,550.0 | 2.84 | 358.89 | 5,543.7 | -99.1 | -10.0 | -98.9 | 7.99 | 7.99 | 0.00 |
| 5,600.0 | 6.84 | 358.89 | 5,593.5 | -94.9 | -10.1 | -94.7 | 8.00 | 8.00 | 0.00 |
| 5,650.0 | 10.84 | 358.89 | 5,642.9 | -87.2 | -10.2 | -87.0 | 8.00 | 8.00 | 0.00 |
| 5,700.0 | 14.84 | 358.89 | 5,691.7 | -76.1 | -10.5 | -75.9 | 8.00 | 8.00 | 0.00 |
| 5,750.0 | 18.84 | 358.89 | 5,739.5 | -61.6 | -10.7 | -61.4 | 8.00 | 8.00 | 0.00 |
| 5,800.0 | 22.84 | 358.89 | 5,786.2 | -43.9 | -11.1 | -43.6 | 8.00 | 8.00 | 0.00 |
| 5,850.0 | 26.84 | 358.89 | 5,831.6 | -22.9 | -11.5 | -22.6 | 8.00 | 8.00 | 0.00 |
| 5,900.0 | 30.84 | 358.89 | 5,875.4 | 1.2 | -12.0 | 1.5 | 8.00 | 8.00 | 0.00 |
| 5,950.0 | 34.84 | 358.89 | 5,917.4 | 28.3 | -12.5 | 28.6 | 8.00 | 8.00 | 0.00 |
| 6,000.0 | 38.84 | 358.89 | 5,957.4 | 58.3 | -13.1 | 58.6 | 8.00 | 8.00 | 0.00 |
| 6,050.0 | 42.84 | 358.89 | 5,995.2 | 91.0 | -13.7 | 91.2 | 8.00 | 8.00 | 0.00 |
| 6,064.8 | 44.02 | 358.89 | 6,006.0 | 101.2 | -13.9 | 101.4 | 8.00 | 8.00 | 0.00 |
| SHARON SPRINGS | | | | | | | | | |
| 6,099.0 | 46.76 | 358.89 | 6,030.0 | 125.5 | -14.4 | 125.8 | 8.00 | 8.00 | 0.00 |
| NIOBRARA - NIO A CHALK | | | | | | | | | |
| 6,100.0 | 46.84 | 358.89 | 6,030.7 | 126.2 | -14.4 | 126.5 | 8.00 | 8.00 | 0.00 |
| 6,144.4 | 50.39 | 358.89 | 6,060.0 | 159.5 | -15.0 | 159.8 | 8.00 | 8.00 | 0.00 |
| NIO A MARL | | | | | | | | | |
| 6,150.0 | 50.84 | 358.89 | 6,063.6 | 163.9 | -15.1 | 164.1 | 8.00 | 8.00 | 0.00 |
| 6,200.0 | 54.84 | 358.89 | 6,093.8 | 203.7 | -15.9 | 204.0 | 8.00 | 8.00 | 0.00 |
| 6,250.0 | 58.84 | 358.89 | 6,121.1 | 245.5 | -16.7 | 245.8 | 8.00 | 8.00 | 0.00 |
| 6,271.6 | 60.56 | 358.89 | 6,132.0 | 264.1 | -17.0 | 264.4 | 8.00 | 8.00 | 0.00 |
| NIO B CHALK | | | | | | | | | |
| 6,300.0 | 62.84 | 358.89 | 6,145.5 | 289.2 | -17.5 | 289.5 | 8.00 | 8.00 | 0.00 |
| 6,335.8 | 65.70 | 358.89 | 6,161.0 | 321.4 | -18.1 | 321.7 | 8.00 | 8.00 | 0.00 |
| NIO B MARL | | | | | | | | | |
| 6,350.0 | 66.84 | 358.89 | 6,166.7 | 334.4 | -18.4 | 334.7 | 8.00 | 8.00 | 0.00 |
| 6,400.0 | 70.84 | 358.89 | 6,184.8 | 381.0 | -19.3 | 381.3 | 8.00 | 8.00 | 0.00 |
| 6,450.0 | 74.84 | 358.89 | 6,199.5 | 428.8 | -20.2 | 429.1 | 8.00 | 8.00 | 0.00 |
| 6,451.8 | 74.98 | 358.89 | 6,200.0 | 430.5 | -20.3 | 430.8 | 8.00 | 8.00 | 0.00 |
| NIO C CHALK | | | | | | | | | |

Noble Energy Inc

Planning Report

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|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| 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) |
| 6,500.0 | 78.84 | 358.89 | 6,210.9 | 477.4 | -21.2 | 477.8 | 8.00 | 8.00 | 0.00 |
| 6,550.0 | 82.84 | 358.89 | 6,218.9 | 526.8 | -22.1 | 527.1 | 8.00 | 8.00 | 0.00 |
| 6,577.0 | 85.00 | 358.89 | 6,221.7 | 553.6 | -22.6 | 554.0 | 8.00 | 8.00 | 0.00 |
| Start 75.0 hold at 6577.0 MD - 7" Casing @ 6577.0' MD | | | | | | | | | |
| 6,600.0 | 85.00 | 358.89 | 6,223.7 | 576.5 | -23.1 | 576.9 | 0.01 | 0.01 | 0.00 |
| 6,650.0 | 85.00 | 358.89 | 6,228.1 | 626.3 | -24.0 | 626.7 | 0.00 | 0.00 | 0.00 |
| 6,652.0 | 85.00 | 358.89 | 6,228.3 | 628.3 | -24.1 | 628.7 | 0.00 | 0.00 | 0.00 |
| Start Build 8.00 | | | | | | | | | |
| 6,700.0 | 88.84 | 358.89 | 6,230.9 | 676.2 | -25.0 | 676.6 | 7.99 | 7.99 | 0.00 |
| 6,714.5 | 90.00 | 358.89 | 6,231.0 | 690.8 | -25.3 | 691.1 | 8.00 | 8.00 | 0.00 |
| 6,750.0 | 90.00 | 358.89 | 6,231.0 | 726.2 | -26.0 | 726.6 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 90.00 | 358.89 | 6,231.0 | 776.2 | -26.9 | 776.6 | 0.00 | 0.00 | 0.00 |
| 6,850.0 | 90.00 | 358.89 | 6,231.0 | 826.2 | -27.9 | 826.6 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 90.00 | 358.89 | 6,231.0 | 876.2 | -28.9 | 876.6 | 0.00 | 0.00 | 0.00 |
| 6,950.0 | 90.00 | 358.89 | 6,231.0 | 926.2 | -29.8 | 926.6 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 90.00 | 358.89 | 6,231.0 | 976.2 | -30.8 | 976.6 | 0.00 | 0.00 | 0.00 |
| 7,050.0 | 90.00 | 358.89 | 6,231.0 | 1,026.2 | -31.8 | 1,026.6 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 90.00 | 358.89 | 6,231.0 | 1,076.2 | -32.7 | 1,076.6 | 0.00 | 0.00 | 0.00 |
| 7,150.0 | 90.00 | 358.89 | 6,231.0 | 1,126.2 | -33.7 | 1,126.6 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 90.00 | 358.89 | 6,231.0 | 1,176.1 | -34.7 | 1,176.6 | 0.00 | 0.00 | 0.00 |
| 7,250.0 | 90.00 | 358.89 | 6,231.0 | 1,226.1 | -35.6 | 1,226.6 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 90.00 | 358.89 | 6,231.0 | 1,276.1 | -36.6 | 1,276.6 | 0.00 | 0.00 | 0.00 |
| 7,350.0 | 90.00 | 358.89 | 6,231.0 | 1,326.1 | -37.6 | 1,326.6 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 90.00 | 358.89 | 6,231.0 | 1,376.1 | -38.5 | 1,376.6 | 0.00 | 0.00 | 0.00 |
| 7,450.0 | 90.00 | 358.89 | 6,231.0 | 1,426.1 | -39.5 | 1,426.6 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 90.00 | 358.89 | 6,231.0 | 1,476.1 | -40.5 | 1,476.6 | 0.00 | 0.00 | 0.00 |
| 7,550.0 | 90.00 | 358.89 | 6,231.0 | 1,526.1 | -41.4 | 1,526.6 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 90.00 | 358.89 | 6,231.0 | 1,576.1 | -42.4 | 1,576.6 | 0.00 | 0.00 | 0.00 |
| 7,650.0 | 90.00 | 358.89 | 6,231.0 | 1,626.1 | -43.4 | 1,626.6 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 90.00 | 358.89 | 6,231.0 | 1,676.0 | -44.3 | 1,676.6 | 0.00 | 0.00 | 0.00 |
| 7,750.0 | 90.00 | 358.89 | 6,231.0 | 1,726.0 | -45.3 | 1,726.6 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 90.00 | 358.89 | 6,231.0 | 1,776.0 | -46.3 | 1,776.6 | 0.00 | 0.00 | 0.00 |
| 7,850.0 | 90.00 | 358.89 | 6,231.0 | 1,826.0 | -47.2 | 1,826.6 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 90.00 | 358.89 | 6,231.0 | 1,876.0 | -48.2 | 1,876.6 | 0.00 | 0.00 | 0.00 |
| 7,950.0 | 90.00 | 358.89 | 6,231.0 | 1,926.0 | -49.2 | 1,926.6 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 90.00 | 358.89 | 6,231.0 | 1,976.0 | -50.1 | 1,976.6 | 0.00 | 0.00 | 0.00 |
| 8,050.0 | 90.00 | 358.89 | 6,231.0 | 2,026.0 | -51.1 | 2,026.6 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 90.00 | 358.89 | 6,231.0 | 2,076.0 | -52.1 | 2,076.6 | 0.00 | 0.00 | 0.00 |
| 8,150.0 | 90.00 | 358.89 | 6,231.0 | 2,126.0 | -53.0 | 2,126.6 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 90.00 | 358.89 | 6,231.0 | 2,176.0 | -54.0 | 2,176.6 | 0.00 | 0.00 | 0.00 |
| 8,250.0 | 90.00 | 358.89 | 6,231.0 | 2,225.9 | -55.0 | 2,226.6 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 90.00 | 358.89 | 6,231.0 | 2,275.9 | -55.9 | 2,276.6 | 0.00 | 0.00 | 0.00 |
| 8,350.0 | 90.00 | 358.89 | 6,231.0 | 2,325.9 | -56.9 | 2,326.6 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 90.00 | 358.89 | 6,231.0 | 2,375.9 | -57.9 | 2,376.6 | 0.00 | 0.00 | 0.00 |
| 8,450.0 | 90.00 | 358.89 | 6,231.0 | 2,425.9 | -58.8 | 2,426.6 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 90.00 | 358.89 | 6,231.0 | 2,475.9 | -59.8 | 2,476.6 | 0.00 | 0.00 | 0.00 |
| 8,550.0 | 90.00 | 358.89 | 6,231.0 | 2,525.9 | -60.8 | 2,526.6 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 90.00 | 358.89 | 6,231.0 | 2,575.9 | -61.7 | 2,576.6 | 0.00 | 0.00 | 0.00 |
| 8,650.0 | 90.00 | 358.89 | 6,231.0 | 2,625.9 | -62.7 | 2,626.6 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 90.00 | 358.89 | 6,231.0 | 2,675.9 | -63.7 | 2,676.6 | 0.00 | 0.00 | 0.00 |
| 8,750.0 | 90.00 | 358.89 | 6,231.0 | 2,725.9 | -64.6 | 2,726.6 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 90.00 | 358.89 | 6,231.0 | 2,775.8 | -65.6 | 2,776.6 | 0.00 | 0.00 | 0.00 |
| 8,850.0 | 90.00 | 358.89 | 6,231.0 | 2,825.8 | -66.6 | 2,826.6 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 90.00 | 358.89 | 6,231.0 | 2,875.8 | -67.5 | 2,876.6 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| 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) | |
| 8,950.0 | 90.00 | 358.89 | 6,231.0 | 2,925.8 | -68.5 | 2,926.6 | 0.00 | 0.00 | 0.00 | |
| 9,000.0 | 90.00 | 358.89 | 6,231.0 | 2,975.8 | -69.5 | 2,976.6 | 0.00 | 0.00 | 0.00 | |
| 9,050.0 | 90.00 | 358.89 | 6,231.0 | 3,025.8 | -70.4 | 3,026.6 | 0.00 | 0.00 | 0.00 | |
| 9,100.0 | 90.00 | 358.89 | 6,231.0 | 3,075.8 | -71.4 | 3,076.6 | 0.00 | 0.00 | 0.00 | |
| 9,150.0 | 90.00 | 358.89 | 6,231.0 | 3,125.8 | -72.4 | 3,126.6 | 0.00 | 0.00 | 0.00 | |
| 9,200.0 | 90.00 | 358.89 | 6,231.0 | 3,175.8 | -73.3 | 3,176.6 | 0.00 | 0.00 | 0.00 | |
| 9,250.0 | 90.00 | 358.89 | 6,231.0 | 3,225.8 | -74.3 | 3,226.6 | 0.00 | 0.00 | 0.00 | |
| 9,300.0 | 90.00 | 358.89 | 6,231.0 | 3,275.7 | -75.3 | 3,276.6 | 0.00 | 0.00 | 0.00 | |
| 9,350.0 | 90.00 | 358.89 | 6,231.0 | 3,325.7 | -76.2 | 3,326.6 | 0.00 | 0.00 | 0.00 | |
| 9,400.0 | 90.00 | 358.89 | 6,231.0 | 3,375.7 | -77.2 | 3,376.6 | 0.00 | 0.00 | 0.00 | |
| 9,450.0 | 90.00 | 358.89 | 6,231.0 | 3,425.7 | -78.2 | 3,426.6 | 0.00 | 0.00 | 0.00 | |
| 9,500.0 | 90.00 | 358.89 | 6,231.0 | 3,475.7 | -79.1 | 3,476.6 | 0.00 | 0.00 | 0.00 | |
| 9,550.0 | 90.00 | 358.89 | 6,231.0 | 3,525.7 | -80.1 | 3,526.6 | 0.00 | 0.00 | 0.00 | |
| 9,600.0 | 90.00 | 358.89 | 6,231.0 | 3,575.7 | -81.1 | 3,576.6 | 0.00 | 0.00 | 0.00 | |
| 9,650.0 | 90.00 | 358.89 | 6,231.0 | 3,625.7 | -82.0 | 3,626.6 | 0.00 | 0.00 | 0.00 | |
| 9,700.0 | 90.00 | 358.89 | 6,231.0 | 3,675.7 | -83.0 | 3,676.6 | 0.00 | 0.00 | 0.00 | |
| 9,750.0 | 90.00 | 358.89 | 6,231.0 | 3,725.7 | -84.0 | 3,726.6 | 0.00 | 0.00 | 0.00 | |
| 9,800.0 | 90.00 | 358.89 | 6,231.0 | 3,775.7 | -84.9 | 3,776.6 | 0.00 | 0.00 | 0.00 | |
| 9,850.0 | 90.00 | 358.89 | 6,231.0 | 3,825.6 | -85.9 | 3,826.6 | 0.00 | 0.00 | 0.00 | |
| 9,900.0 | 90.00 | 358.89 | 6,231.0 | 3,875.6 | -86.9 | 3,876.6 | 0.00 | 0.00 | 0.00 | |
| 9,950.0 | 90.00 | 358.89 | 6,231.0 | 3,925.6 | -87.8 | 3,926.6 | 0.00 | 0.00 | 0.00 | |
| 10,000.0 | 90.00 | 358.89 | 6,231.0 | 3,975.6 | -88.8 | 3,976.6 | 0.00 | 0.00 | 0.00 | |
| 10,050.0 | 90.00 | 358.89 | 6,231.0 | 4,025.6 | -89.8 | 4,026.6 | 0.00 | 0.00 | 0.00 | |
| 10,100.0 | 90.00 | 358.89 | 6,231.0 | 4,075.6 | -90.7 | 4,076.6 | 0.00 | 0.00 | 0.00 | |
| 10,150.0 | 90.00 | 358.89 | 6,231.0 | 4,125.6 | -91.7 | 4,126.6 | 0.00 | 0.00 | 0.00 | |
| 10,200.0 | 90.00 | 358.89 | 6,231.0 | 4,175.6 | -92.7 | 4,176.6 | 0.00 | 0.00 | 0.00 | |
| 10,250.0 | 90.00 | 358.89 | 6,231.0 | 4,225.6 | -93.6 | 4,226.6 | 0.00 | 0.00 | 0.00 | |
| 10,300.0 | 90.00 | 358.89 | 6,231.0 | 4,275.6 | -94.6 | 4,276.6 | 0.00 | 0.00 | 0.00 | |
| 10,350.0 | 90.00 | 358.89 | 6,231.0 | 4,325.6 | -95.6 | 4,326.6 | 0.00 | 0.00 | 0.00 | |
| 10,400.0 | 90.00 | 358.89 | 6,231.0 | 4,375.5 | -96.5 | 4,376.6 | 0.00 | 0.00 | 0.00 | |
| 10,450.0 | 90.00 | 358.89 | 6,231.0 | 4,425.5 | -97.5 | 4,426.6 | 0.00 | 0.00 | 0.00 | |
| 10,500.0 | 90.00 | 358.89 | 6,231.0 | 4,475.5 | -98.5 | 4,476.6 | 0.00 | 0.00 | 0.00 | |
| 10,550.0 | 90.00 | 358.89 | 6,231.0 | 4,525.5 | -99.4 | 4,526.6 | 0.00 | 0.00 | 0.00 | |
| 10,600.0 | 90.00 | 358.89 | 6,231.0 | 4,575.5 | -100.4 | 4,576.6 | 0.00 | 0.00 | 0.00 | |
| 10,650.0 | 90.00 | 358.89 | 6,231.0 | 4,625.5 | -101.4 | 4,626.6 | 0.00 | 0.00 | 0.00 | |
| 10,700.0 | 90.00 | 358.89 | 6,231.0 | 4,675.5 | -102.3 | 4,676.6 | 0.00 | 0.00 | 0.00 | |
| 10,750.0 | 90.00 | 358.89 | 6,231.0 | 4,725.5 | -103.3 | 4,726.6 | 0.00 | 0.00 | 0.00 | |
| 10,800.0 | 90.00 | 358.89 | 6,231.0 | 4,775.5 | -104.3 | 4,776.6 | 0.00 | 0.00 | 0.00 | |
| 10,850.0 | 90.00 | 358.89 | 6,231.0 | 4,825.5 | -105.2 | 4,826.6 | 0.00 | 0.00 | 0.00 | |
| 10,900.0 | 90.00 | 358.89 | 6,231.0 | 4,875.5 | -106.2 | 4,876.6 | 0.00 | 0.00 | 0.00 | |
| 10,950.0 | 90.00 | 358.89 | 6,231.0 | 4,925.4 | -107.2 | 4,926.6 | 0.00 | 0.00 | 0.00 | |
| 11,000.0 | 90.00 | 358.89 | 6,231.0 | 4,975.4 | -108.1 | 4,976.6 | 0.00 | 0.00 | 0.00 | |
| 11,050.0 | 90.00 | 358.89 | 6,231.0 | 5,025.4 | -109.1 | 5,026.6 | 0.00 | 0.00 | 0.00 | |
| 11,100.0 | 90.00 | 358.89 | 6,231.0 | 5,075.4 | -110.1 | 5,076.6 | 0.00 | 0.00 | 0.00 | |
| 11,150.0 | 90.00 | 358.89 | 6,231.0 | 5,125.4 | -111.0 | 5,126.6 | 0.00 | 0.00 | 0.00 | |
| 11,200.0 | 90.00 | 358.89 | 6,231.0 | 5,175.4 | -112.0 | 5,176.6 | 0.00 | 0.00 | 0.00 | |
| 11,250.0 | 90.00 | 358.89 | 6,231.0 | 5,225.4 | -113.0 | 5,226.6 | 0.00 | 0.00 | 0.00 | |
| 11,300.0 | 90.00 | 358.89 | 6,231.0 | 5,275.4 | -113.9 | 5,276.6 | 0.00 | 0.00 | 0.00 | |
| 11,350.0 | 90.00 | 358.89 | 6,231.0 | 5,325.4 | -114.9 | 5,326.6 | 0.00 | 0.00 | 0.00 | |
| 11,400.0 | 90.00 | 358.89 | 6,231.0 | 5,375.4 | -115.9 | 5,376.6 | 0.00 | 0.00 | 0.00 | |
| 11,450.0 | 90.00 | 358.89 | 6,231.0 | 5,425.3 | -116.8 | 5,426.6 | 0.00 | 0.00 | 0.00 | |
| 11,500.0 | 90.00 | 358.89 | 6,231.0 | 5,475.3 | -117.8 | 5,476.6 | 0.00 | 0.00 | 0.00 | |
| 11,550.0 | 90.00 | 358.89 | 6,231.0 | 5,525.3 | -118.8 | 5,526.6 | 0.00 | 0.00 | 0.00 | |
| 11,600.0 | 90.00 | 358.89 | 6,231.0 | 5,575.3 | -119.7 | 5,576.6 | 0.00 | 0.00 | 0.00 | |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| 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) |
| 11,650.0 | 90.00 | 358.89 | 6,231.0 | 5,625.3 | -120.7 | 5,626.6 | 0.00 | 0.00 | 0.00 |
| 11,700.0 | 90.00 | 358.89 | 6,231.0 | 5,675.3 | -121.7 | 5,676.6 | 0.00 | 0.00 | 0.00 |
| 11,750.0 | 90.00 | 358.89 | 6,231.0 | 5,725.3 | -122.6 | 5,726.6 | 0.00 | 0.00 | 0.00 |
| 11,800.0 | 90.00 | 358.89 | 6,231.0 | 5,775.3 | -123.6 | 5,776.6 | 0.00 | 0.00 | 0.00 |
| 11,850.0 | 90.00 | 358.89 | 6,231.0 | 5,825.3 | -124.6 | 5,826.6 | 0.00 | 0.00 | 0.00 |
| 11,900.0 | 90.00 | 358.89 | 6,231.0 | 5,875.3 | -125.5 | 5,876.6 | 0.00 | 0.00 | 0.00 |
| 11,950.0 | 90.00 | 358.89 | 6,231.0 | 5,925.3 | -126.5 | 5,926.6 | 0.00 | 0.00 | 0.00 |
| 12,000.0 | 90.00 | 358.89 | 6,231.0 | 5,975.2 | -127.5 | 5,976.6 | 0.00 | 0.00 | 0.00 |
| 12,050.0 | 90.00 | 358.89 | 6,231.0 | 6,025.2 | -128.4 | 6,026.6 | 0.00 | 0.00 | 0.00 |
| 12,100.0 | 90.00 | 358.89 | 6,231.0 | 6,075.2 | -129.4 | 6,076.6 | 0.00 | 0.00 | 0.00 |
| 12,150.0 | 90.00 | 358.89 | 6,231.0 | 6,125.2 | -130.4 | 6,126.6 | 0.00 | 0.00 | 0.00 |
| 12,200.0 | 90.00 | 358.89 | 6,231.0 | 6,175.2 | -131.3 | 6,176.6 | 0.00 | 0.00 | 0.00 |
| 12,250.0 | 90.00 | 358.89 | 6,231.0 | 6,225.2 | -132.3 | 6,226.6 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 90.00 | 358.89 | 6,231.0 | 6,275.2 | -133.3 | 6,276.6 | 0.00 | 0.00 | 0.00 |
| 12,350.0 | 90.00 | 358.89 | 6,231.0 | 6,325.2 | -134.2 | 6,326.6 | 0.00 | 0.00 | 0.00 |
| 12,400.0 | 90.00 | 358.89 | 6,231.0 | 6,375.2 | -135.2 | 6,376.6 | 0.00 | 0.00 | 0.00 |
| 12,450.0 | 90.00 | 358.89 | 6,231.0 | 6,425.2 | -136.2 | 6,426.6 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 90.00 | 358.89 | 6,231.0 | 6,475.2 | -137.1 | 6,476.6 | 0.00 | 0.00 | 0.00 |
| 12,550.0 | 90.00 | 358.89 | 6,231.0 | 6,525.1 | -138.1 | 6,526.6 | 0.00 | 0.00 | 0.00 |
| 12,600.0 | 90.00 | 358.89 | 6,231.0 | 6,575.1 | -139.1 | 6,576.6 | 0.00 | 0.00 | 0.00 |
| 12,650.0 | 90.00 | 358.89 | 6,231.0 | 6,625.1 | -140.0 | 6,626.6 | 0.00 | 0.00 | 0.00 |
| 12,700.0 | 90.00 | 358.89 | 6,231.0 | 6,675.1 | -141.0 | 6,676.6 | 0.00 | 0.00 | 0.00 |
| 12,750.0 | 90.00 | 358.89 | 6,231.0 | 6,725.1 | -142.0 | 6,726.6 | 0.00 | 0.00 | 0.00 |
| 12,800.0 | 90.00 | 358.89 | 6,231.0 | 6,775.1 | -142.9 | 6,776.6 | 0.00 | 0.00 | 0.00 |
| 12,850.0 | 90.00 | 358.89 | 6,231.0 | 6,825.1 | -143.9 | 6,826.6 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 90.00 | 358.89 | 6,231.0 | 6,875.1 | -144.9 | 6,876.6 | 0.00 | 0.00 | 0.00 |
| 12,950.0 | 90.00 | 358.89 | 6,231.0 | 6,925.1 | -145.8 | 6,926.6 | 0.00 | 0.00 | 0.00 |
| 13,000.0 | 90.00 | 358.89 | 6,231.0 | 6,975.1 | -146.8 | 6,976.6 | 0.00 | 0.00 | 0.00 |
| 13,050.0 | 90.00 | 358.89 | 6,231.0 | 7,025.0 | -147.8 | 7,026.6 | 0.00 | 0.00 | 0.00 |
| 13,100.0 | 90.00 | 358.89 | 6,231.0 | 7,075.0 | -148.7 | 7,076.6 | 0.00 | 0.00 | 0.00 |
| 13,150.0 | 90.00 | 358.89 | 6,231.0 | 7,125.0 | -149.7 | 7,126.6 | 0.00 | 0.00 | 0.00 |
| 13,200.0 | 90.00 | 358.89 | 6,231.0 | 7,175.0 | -150.7 | 7,176.6 | 0.00 | 0.00 | 0.00 |
| 13,250.0 | 90.00 | 358.89 | 6,231.0 | 7,225.0 | -151.6 | 7,226.6 | 0.00 | 0.00 | 0.00 |
| 13,300.0 | 90.00 | 358.89 | 6,231.0 | 7,275.0 | -152.6 | 7,276.6 | 0.00 | 0.00 | 0.00 |
| 13,350.0 | 90.00 | 358.89 | 6,231.0 | 7,325.0 | -153.6 | 7,326.6 | 0.00 | 0.00 | 0.00 |
| 13,400.0 | 90.00 | 358.89 | 6,231.0 | 7,375.0 | -154.5 | 7,376.6 | 0.00 | 0.00 | 0.00 |
| 13,450.0 | 90.00 | 358.89 | 6,231.0 | 7,425.0 | -155.5 | 7,426.6 | 0.00 | 0.00 | 0.00 |
| 13,500.0 | 90.00 | 358.89 | 6,231.0 | 7,475.0 | -156.5 | 7,476.6 | 0.00 | 0.00 | 0.00 |
| 13,550.0 | 90.00 | 358.89 | 6,231.0 | 7,525.0 | -157.4 | 7,526.6 | 0.00 | 0.00 | 0.00 |
| 13,600.0 | 90.00 | 358.89 | 6,231.0 | 7,574.9 | -158.4 | 7,576.6 | 0.00 | 0.00 | 0.00 |
| 13,650.0 | 90.00 | 358.89 | 6,231.0 | 7,624.9 | -159.4 | 7,626.6 | 0.00 | 0.00 | 0.00 |
| 13,700.0 | 90.00 | 358.89 | 6,231.0 | 7,674.9 | -160.3 | 7,676.6 | 0.00 | 0.00 | 0.00 |
| 13,750.0 | 90.00 | 358.89 | 6,231.0 | 7,724.9 | -161.3 | 7,726.6 | 0.00 | 0.00 | 0.00 |
| 13,800.0 | 90.00 | 358.89 | 6,231.0 | 7,774.9 | -162.3 | 7,776.6 | 0.00 | 0.00 | 0.00 |
| 13,850.0 | 90.00 | 358.89 | 6,231.0 | 7,824.9 | -163.2 | 7,826.6 | 0.00 | 0.00 | 0.00 |
| 13,900.0 | 90.00 | 358.89 | 6,231.0 | 7,874.9 | -164.2 | 7,876.6 | 0.00 | 0.00 | 0.00 |
| 13,950.0 | 90.00 | 358.89 | 6,231.0 | 7,924.9 | -165.2 | 7,926.6 | 0.00 | 0.00 | 0.00 |
| 14,000.0 | 90.00 | 358.89 | 6,231.0 | 7,974.9 | -166.1 | 7,976.6 | 0.00 | 0.00 | 0.00 |
| 14,050.0 | 90.00 | 358.89 | 6,231.0 | 8,024.9 | -167.1 | 8,026.6 | 0.00 | 0.00 | 0.00 |
| 14,100.0 | 90.00 | 358.89 | 6,231.0 | 8,074.9 | -168.1 | 8,076.6 | 0.00 | 0.00 | 0.00 |
| 14,150.0 | 90.00 | 358.89 | 6,231.0 | 8,124.8 | -169.0 | 8,126.6 | 0.00 | 0.00 | 0.00 |
| 14,200.0 | 90.00 | 358.89 | 6,231.0 | 8,174.8 | -170.0 | 8,176.6 | 0.00 | 0.00 | 0.00 |
| 14,250.0 | 90.00 | 358.89 | 6,231.0 | 8,224.8 | -171.0 | 8,226.6 | 0.00 | 0.00 | 0.00 |
| 14,300.0 | 90.00 | 358.89 | 6,231.0 | 8,274.8 | -171.9 | 8,276.6 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| 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) |
| 14,350.0 | 90.00 | 358.89 | 6,231.0 | 8,324.8 | -172.9 | 8,326.6 | 0.00 | 0.00 | 0.00 |
| 14,400.0 | 90.00 | 358.89 | 6,231.0 | 8,374.8 | -173.9 | 8,376.6 | 0.00 | 0.00 | 0.00 |
| 14,450.0 | 90.00 | 358.89 | 6,231.0 | 8,424.8 | -174.8 | 8,426.6 | 0.00 | 0.00 | 0.00 |
| 14,500.0 | 90.00 | 358.89 | 6,231.0 | 8,474.8 | -175.8 | 8,476.6 | 0.00 | 0.00 | 0.00 |
| 14,550.0 | 90.00 | 358.89 | 6,231.0 | 8,524.8 | -176.8 | 8,526.6 | 0.00 | 0.00 | 0.00 |
| 14,600.0 | 90.00 | 358.89 | 6,231.0 | 8,574.8 | -177.7 | 8,576.6 | 0.00 | 0.00 | 0.00 |
| 14,650.0 | 90.00 | 358.89 | 6,231.0 | 8,624.7 | -178.7 | 8,626.6 | 0.00 | 0.00 | 0.00 |
| 14,700.0 | 90.00 | 358.89 | 6,231.0 | 8,674.7 | -179.7 | 8,676.6 | 0.00 | 0.00 | 0.00 |
| 14,750.0 | 90.00 | 358.89 | 6,231.0 | 8,724.7 | -180.6 | 8,726.6 | 0.00 | 0.00 | 0.00 |
| 14,800.0 | 90.00 | 358.89 | 6,231.0 | 8,774.7 | -181.6 | 8,776.6 | 0.00 | 0.00 | 0.00 |
| 14,850.0 | 90.00 | 358.89 | 6,231.0 | 8,824.7 | -182.6 | 8,826.6 | 0.00 | 0.00 | 0.00 |
| 14,900.0 | 90.00 | 358.89 | 6,231.0 | 8,874.7 | -183.5 | 8,876.6 | 0.00 | 0.00 | 0.00 |
| 14,950.0 | 90.00 | 358.89 | 6,231.0 | 8,924.7 | -184.5 | 8,926.6 | 0.00 | 0.00 | 0.00 |
| 15,000.0 | 90.00 | 358.89 | 6,231.0 | 8,974.7 | -185.5 | 8,976.6 | 0.00 | 0.00 | 0.00 |
| 15,050.0 | 90.00 | 358.89 | 6,231.0 | 9,024.7 | -186.4 | 9,026.6 | 0.00 | 0.00 | 0.00 |
| 15,100.0 | 90.00 | 358.89 | 6,231.0 | 9,074.7 | -187.4 | 9,076.6 | 0.00 | 0.00 | 0.00 |
| 15,150.0 | 90.00 | 358.89 | 6,231.0 | 9,124.7 | -188.4 | 9,126.6 | 0.00 | 0.00 | 0.00 |
| 15,200.0 | 90.00 | 358.89 | 6,231.0 | 9,174.6 | -189.3 | 9,176.6 | 0.00 | 0.00 | 0.00 |
| 15,250.0 | 90.00 | 358.89 | 6,231.0 | 9,224.6 | -190.3 | 9,226.6 | 0.00 | 0.00 | 0.00 |
| 15,300.0 | 90.00 | 358.89 | 6,231.0 | 9,274.6 | -191.3 | 9,276.6 | 0.00 | 0.00 | 0.00 |
| 15,350.0 | 90.00 | 358.89 | 6,231.0 | 9,324.6 | -192.2 | 9,326.6 | 0.00 | 0.00 | 0.00 |
| 15,400.0 | 90.00 | 358.89 | 6,231.0 | 9,374.6 | -193.2 | 9,376.6 | 0.00 | 0.00 | 0.00 |
| 15,450.0 | 90.00 | 358.89 | 6,231.0 | 9,424.6 | -194.2 | 9,426.6 | 0.00 | 0.00 | 0.00 |
| 15,500.0 | 90.00 | 358.89 | 6,231.0 | 9,474.6 | -195.1 | 9,476.6 | 0.00 | 0.00 | 0.00 |
| 15,550.0 | 90.00 | 358.89 | 6,231.0 | 9,524.6 | -196.1 | 9,526.6 | 0.00 | 0.00 | 0.00 |
| 15,600.0 | 90.00 | 358.89 | 6,231.0 | 9,574.6 | -197.1 | 9,576.6 | 0.00 | 0.00 | 0.00 |
| 15,634.6 | 90.00 | 358.89 | 6,231.0 | 9,609.1 | -197.7 | 9,611.2 | 0.00 | 0.00 | 0.00 |
| TD at 15634.6 - Rico LC29-78-1HNC BHL 675'FNL, 990'FWL | | | | | | | | | |

| 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 | | | | | | | | | |
| Rico LC29-78-1HNC BH | 0.00 | 0.00 | 6,231.0 | 9,609.1 | -197.7 | 1,516,371.57 | 3,413,450.92 | 40.741280 | -104.007910 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

| Casing Points | | | | |
|-----------------------|-----------------------|------------------------|---------------------|-------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
| 6,577.0 | 6,221.7 | 7" Casing @ 6577.0' MD | 7 | 8-3/4 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Formations | | | | | | |
|-----------------------|-----------------------|----------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 1,374.0 | 1,374.0 | PIERRE | | 0.00 | | |
| 3,478.3 | 3,472.0 | PARKMAN | | 0.00 | | |
| 4,191.3 | 4,185.0 | SUSSEX | | 0.00 | | |
| 4,596.3 | 4,590.0 | SHANNON | | 0.00 | | |
| 5,376.3 | 5,370.0 | TEEPEE BUTTES | | 0.00 | | |
| 6,064.8 | 6,006.0 | SHARON SPRINGS | | 0.00 | | |
| 6,099.0 | 6,030.0 | NIOBRARA | | 0.00 | | |
| 6,099.0 | 6,030.0 | NIO A CHALK | | 0.00 | | |
| 6,144.4 | 6,060.0 | NIO A MARL | | 0.00 | | |
| 6,271.6 | 6,132.0 | NIO B CHALK | | 0.00 | | |
| 6,335.8 | 6,161.0 | NIO B MARL | | 0.00 | | |
| 6,451.8 | 6,200.0 | NIO C CHALK | | 0.00 | | |

| Plan Annotations | | | | | |
|-----------------------|-----------------------|-------------------|--------------|------------------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | | |
| | | +N/-S (usft) | +E/-W (usft) | Comment | |
| 1,800.0 | 1,800.0 | 0.0 | 0.0 | KOP - Start Build 2.00 | |
| 2,367.2 | 2,363.6 | -55.1 | -5.5 | Start Drop -2.00 | |
| 5,514.5 | 5,508.2 | -100.0 | -10.0 | KOP #2 - Start Build 8.00 | |
| 6,577.0 | 6,221.7 | 553.6 | -22.6 | Start 75.0 hold at 6577.0 MD | |
| 6,652.0 | 6,228.3 | 628.3 | -24.1 | Start Build 8.00 | |
| 15,634.6 | 6,231.0 | 9,609.1 | -197.7 | TD at 15634.6 | |

Northern Region Drilling - Working

**Wattenberg Field
LC (09N-59W)
Rico LC29-78-1HNC**

**Original Drilling
APD - Rev 0**

Anticollision Summary Report

28 August, 2013

Noble Energy Inc
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|--|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Project: | Wattenberg Field | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Reference Site: | LC (09N-59W) | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site Error: | 0.0 usft | North Reference: | Grid |
| Reference Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Production |
| Reference Design: | APD - Rev 0 | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | APD - Rev 0 | | |
| Filter type: | NO GLOBAL FILTER: Using user defined selection & filtering criteria | | |
| Interpolation Method: | Stations | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 10,000.0 usft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.00 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|------------------|---------------------------------|------------------|---|
| Survey Tool Program | Date | 8/28/2013 | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 15,634.5 | APD - Rev 0 (Original Drilling) | MWD+IFR1+MS_WY | Fixed:v2:Rockies, crustal dec + 3-axis correction |

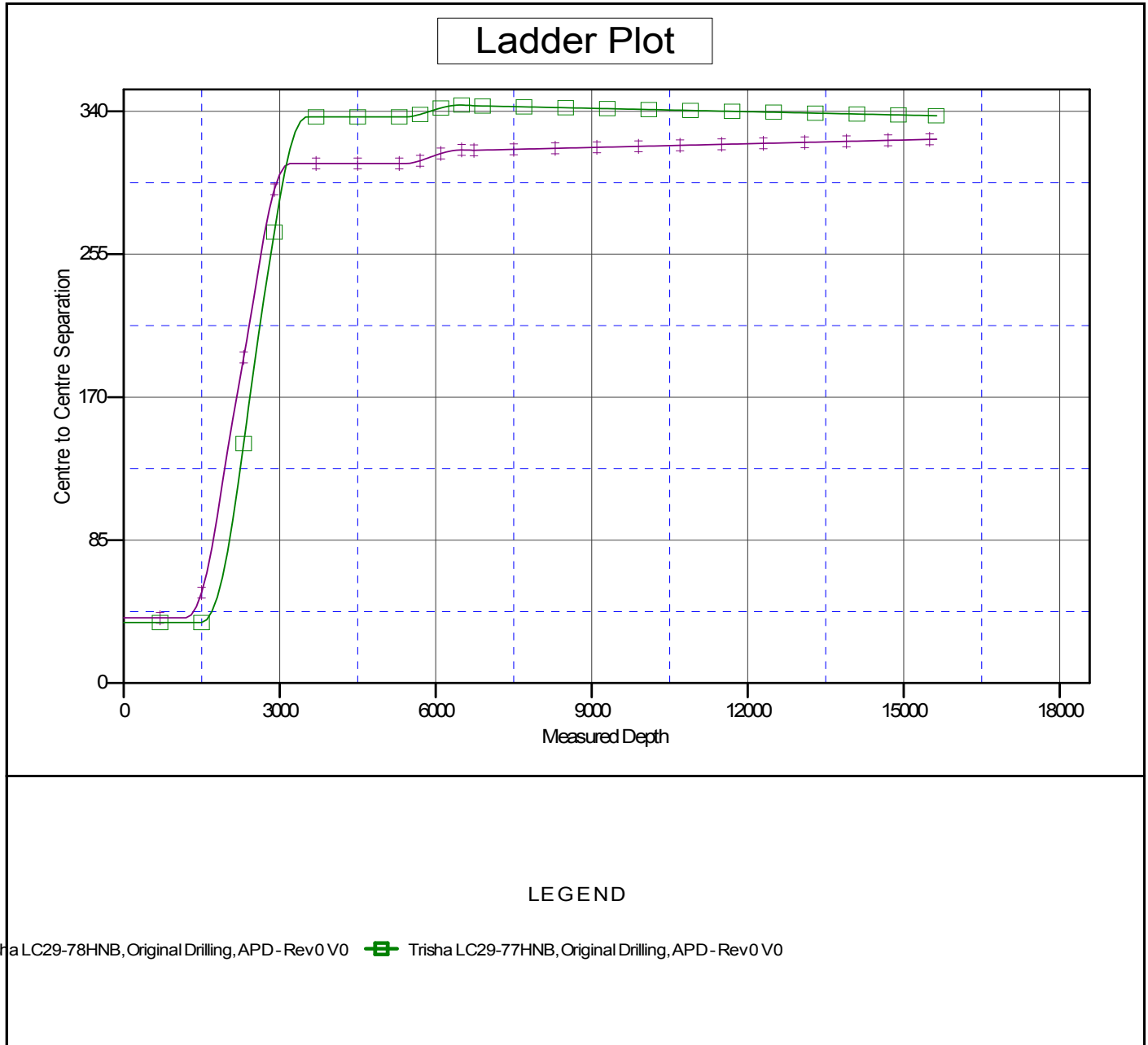
| | | | | | | |
|---|--|-------------------------------------|--|---|--------------------------|----------------|
| Summary | | | | | | |
| Site Name | Reference Measured Depth (usft) | Offset Measured Depth (usft) | Distance Between Centres (usft) | Distance Between Ellipses (usft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| LC (09N-59W) | | | | | | |
| Trisha LC29-77HNB - Original Drilling - APD - Rev 0 | 1,500.0 | 1,500.0 | 36.0 | 29.6 | 5.587 | CC, ES |
| Trisha LC29-77HNB - Original Drilling - APD - Rev 0 | 15,634.6 | 15,569.6 | 337.3 | 149.1 | 1.792 | Level 3, SF |
| Trisha LC29-78HNB - Original Drilling - APD - Rev 0 | 1,200.0 | 1,200.0 | 38.8 | 33.7 | 7.607 | CC, ES |
| Trisha LC29-78HNB - Original Drilling - APD - Rev 0 | 15,634.6 | 15,567.7 | 323.4 | 135.4 | 1.721 | Level 3, SF |

Noble Energy Inc
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|--|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Project: | Wattenberg Field | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Reference Site: | LC (09N-59W) | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site Error: | 0.0 usft | North Reference: | Grid |
| Reference Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Production |
| Reference Design: | APD - Rev 0 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4912.0usft (Original Well Ele)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Rico LC29-78-1HNC
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.96°



Noble Energy Inc

Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|--|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Rico LC29-78-1HNC |
| Project: | Wattenberg Field | TVD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Reference Site: | LC (09N-59W) | MD Reference: | WELL @ 4912.0usft (Original Well Elev) |
| Site Error: | 0.0 usft | North Reference: | Grid |
| Reference Well: | Rico LC29-78-1HNC | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 usft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM Production |
| Reference Design: | APD - Rev 0 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4912.0usft (Original Well Ele
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