

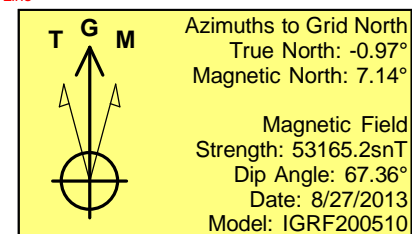
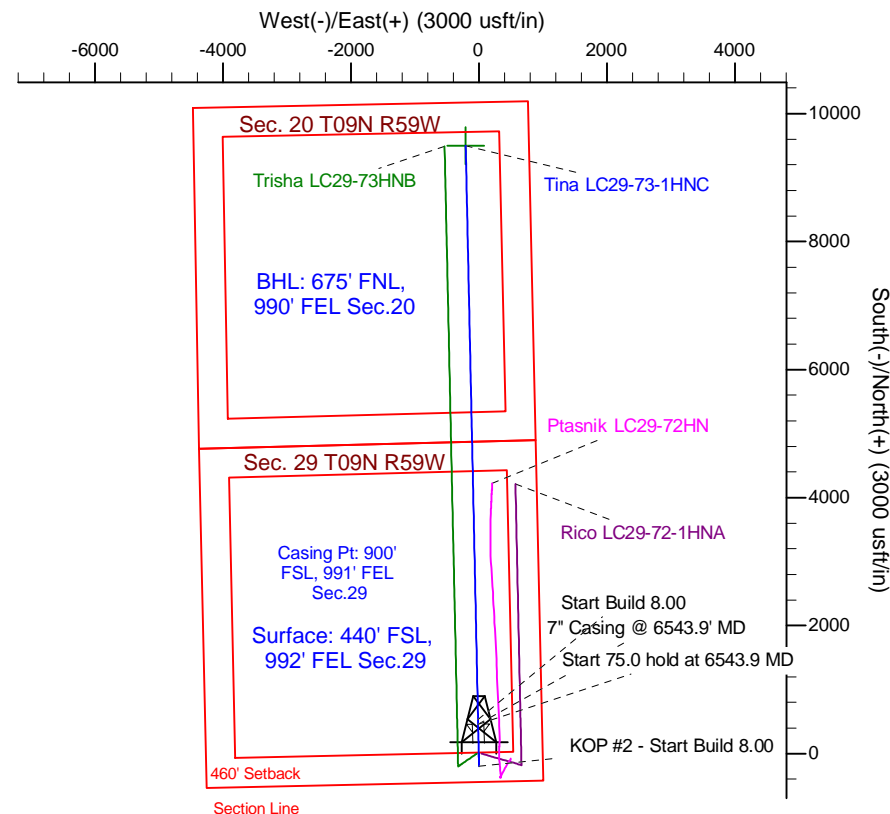
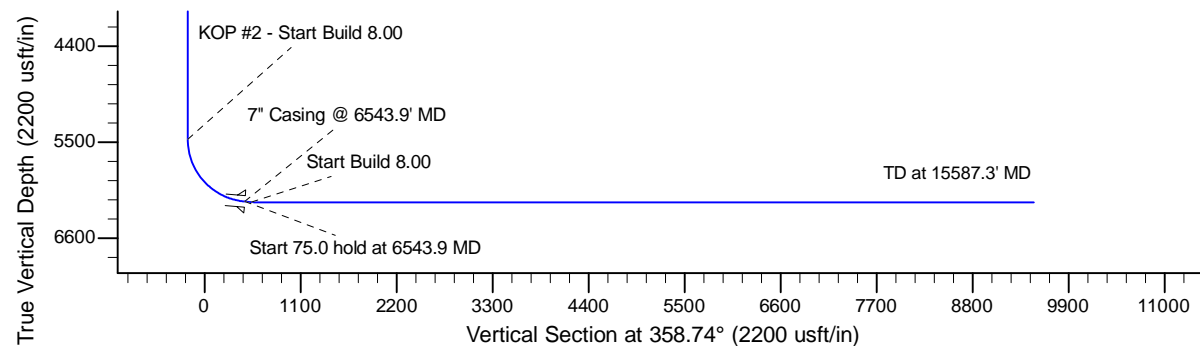
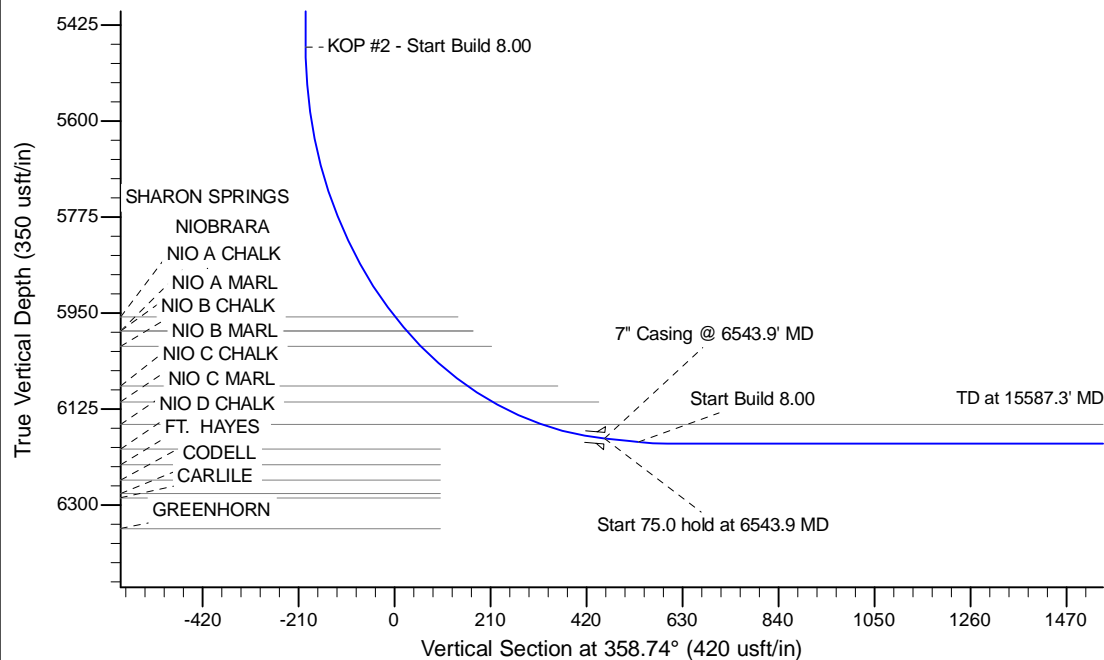
Project: Wattenberg Field
 Site: LC (Sec.29-T09N-R59W) Weld County, CO
 Well: Tina LC29-73-1HNC
 Wellbore: Original Drilling
 Design: APD - Rev 0

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 | VSect | 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 | 2401.1 | 12.02 | 180.00 | 2396.7 | -62.8 | 0.0 | 2.00 | 180.00 | -62.8 | |
| 4 | 2734.0 | 12.02 | 180.00 | 2722.3 | -132.2 | 0.0 | 0.00 | 0.00 | -132.1 | |
| 5 | 3335.1 | 0.00 | 0.00 | 3319.0 | -195.0 | 0.0 | 2.00 | 180.00 | -195.0 | |
| 6 | 5481.4 | 0.00 | 0.00 | 5465.3 | -195.0 | 0.0 | 0.00 | 0.00 | -195.0 | |
| 7 | 6543.9 | 85.00 | 358.77 | 6178.7 | 458.6 | -14.0 | 8.00 | 358.77 | 458.8 | |
| 8 | 6618.9 | 85.00 | 358.77 | 6185.3 | 533.3 | -15.6 | 0.00 | 0.00 | 533.5 | |
| 9 | 6681.4 | 90.00 | 358.77 | 6188.0 | 595.7 | -17.0 | 8.00 | 0.00 | 596.0 | |
| 10 | 15587.3 | 90.00 | 358.77 | 6188.0 | 9499.6 | -208.3 | 0.00 | 0.00 | 9501.9 | Tina LC29-73-1HNC BHL 675'FNL, 990'FEL |



| WELL DETAILS: Tina LC29-73-1HNC | | | | | |
|---|-----|------------|-----------------------------|-----------|-------------|
| Ground Level: 4865.0 | | | | | |
| 0.0 | 0.0 | 1506938.00 | 3416917.32 | 40.715230 | -103.995980 |
| Plan: APD - Rev 0 (Tina LC29-73-1HNC/Original Drilling) | | | | | |
| Created By: Shailey Jewell | | | Date: 16:14, August 27 2013 | | |
| Checked: _____ | | | Date: _____ | | |
| Reviewed: _____ | | | Date: _____ | | |
| Approved: _____ | | | Date: _____ | | |

Northern Region Drilling - Working

Wattenberg Field

LC (09N-59W)

Tina LC29-73-1HNC

Original Drilling

Plan: APD - Rev 0

Standard Planning Report

27 August, 2013

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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 | Tina LC29-73-1HNC | | | | | |
| Well Position | +N/-S | -20,771.7 usft | Northing: | 1,506,938.00 usft | Latitude: | 40.715230 |
| | +E/-W | -16,810.7 usft | Easting: | 3,416,917.31 usft | Longitude: | -103.995980 |
| Position Uncertainty | | 0.0 usft | Wellhead Elevation: | | Ground Level: | 4,865.0 usft |

| | | | | | |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
| Wellbore | Original Drilling | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 8/27/2013 | 8.12 | 67.36 | 53,165 |

| | | | | |
|--------------------------|------------------------------------|-------------------------|-------------------------|--------------------------|
| 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 | 358.74 |

| 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 | |
| 2,401.1 | 12.02 | 180.00 | 2,396.7 | -62.8 | 0.0 | 2.00 | 2.00 | 0.00 | 180.00 | |
| 2,734.0 | 12.02 | 180.00 | 2,722.3 | -132.2 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3,335.1 | 0.00 | 0.00 | 3,319.0 | -195.0 | 0.0 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 5,481.4 | 0.00 | 0.00 | 5,465.3 | -195.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,543.9 | 85.00 | 358.77 | 6,178.7 | 458.6 | -14.0 | 8.00 | 8.00 | 0.00 | 358.77 | |
| 6,618.9 | 85.00 | 358.77 | 6,185.3 | 533.3 | -15.6 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 6,681.4 | 90.00 | 358.77 | 6,188.0 | 595.7 | -17.0 | 8.00 | 8.00 | 0.00 | 0.00 | |
| 15,587.3 | 90.00 | 358.77 | 6,188.0 | 9,499.6 | -208.3 | 0.00 | 0.00 | 0.00 | 0.00 | Tina LC29-73-1HNC f |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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 |
| 1,276.0 | 0.00 | 0.00 | 1,276.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| PIERRE | | | | | | | | | |
| 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 |
| 1,400.0 | 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 | 180.00 | 1,850.0 | -0.4 | 0.0 | -0.4 | 2.00 | 2.00 | 0.00 |
| 1,900.0 | 2.00 | 180.00 | 1,900.0 | -1.7 | 0.0 | -1.7 | 2.00 | 2.00 | 0.00 |
| 1,950.0 | 3.00 | 180.00 | 1,949.9 | -3.9 | 0.0 | -3.9 | 2.00 | 2.00 | 0.00 |
| 2,000.0 | 4.00 | 180.00 | 1,999.8 | -7.0 | 0.0 | -7.0 | 2.00 | 2.00 | 0.00 |
| 2,050.0 | 5.00 | 180.00 | 2,049.7 | -10.9 | 0.0 | -10.9 | 2.00 | 2.00 | 0.00 |
| 2,100.0 | 6.00 | 180.00 | 2,099.5 | -15.7 | 0.0 | -15.7 | 2.00 | 2.00 | 0.00 |
| 2,150.0 | 7.00 | 180.00 | 2,149.1 | -21.4 | 0.0 | -21.3 | 2.00 | 2.00 | 0.00 |
| 2,200.0 | 8.00 | 180.00 | 2,198.7 | -27.9 | 0.0 | -27.9 | 2.00 | 2.00 | 0.00 |
| 2,250.0 | 9.00 | 180.00 | 2,248.2 | -35.3 | 0.0 | -35.3 | 2.00 | 2.00 | 0.00 |
| 2,300.0 | 10.00 | 180.00 | 2,297.5 | -43.5 | 0.0 | -43.5 | 2.00 | 2.00 | 0.00 |
| 2,350.0 | 11.00 | 180.00 | 2,346.6 | -52.6 | 0.0 | -52.6 | 2.00 | 2.00 | 0.00 |
| 2,400.0 | 12.00 | 180.00 | 2,395.6 | -62.6 | 0.0 | -62.6 | 2.00 | 2.00 | 0.00 |
| 2,401.1 | 12.02 | 180.00 | 2,396.7 | -62.8 | 0.0 | -62.8 | 2.00 | 2.00 | 0.00 |
| 2,450.0 | 12.02 | 180.00 | 2,444.5 | -73.0 | 0.0 | -73.0 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

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|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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) |
| 2,500.0 | 12.02 | 180.00 | 2,493.4 | -83.4 | 0.0 | -83.4 | 0.00 | 0.00 | 0.00 |
| 2,550.0 | 12.02 | 180.00 | 2,542.3 | -93.8 | 0.0 | -93.8 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 12.02 | 180.00 | 2,591.2 | -104.3 | 0.0 | -104.2 | 0.00 | 0.00 | 0.00 |
| 2,650.0 | 12.02 | 180.00 | 2,640.1 | -114.7 | 0.0 | -114.6 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 12.02 | 180.00 | 2,689.0 | -125.1 | 0.0 | -125.1 | 0.00 | 0.00 | 0.00 |
| 2,734.0 | 12.02 | 180.00 | 2,722.3 | -132.2 | 0.0 | -132.1 | 0.00 | 0.00 | 0.00 |
| Start Drop -2.00 | | | | | | | | | |
| 2,750.0 | 11.70 | 180.00 | 2,738.0 | -135.5 | 0.0 | -135.4 | 2.00 | -2.00 | 0.00 |
| 2,800.0 | 10.70 | 180.00 | 2,787.0 | -145.2 | 0.0 | -145.1 | 2.00 | -2.00 | 0.00 |
| 2,850.0 | 9.70 | 180.00 | 2,836.2 | -154.0 | 0.0 | -154.0 | 2.00 | -2.00 | 0.00 |
| 2,900.0 | 8.70 | 180.00 | 2,885.6 | -162.0 | 0.0 | -162.0 | 2.00 | -2.00 | 0.00 |
| 2,950.0 | 7.70 | 180.00 | 2,935.1 | -169.2 | 0.0 | -169.1 | 2.00 | -2.00 | 0.00 |
| 3,000.0 | 6.70 | 180.00 | 2,984.7 | -175.4 | 0.0 | -175.4 | 2.00 | -2.00 | 0.00 |
| 3,050.0 | 5.70 | 180.00 | 3,034.4 | -180.8 | 0.0 | -180.8 | 2.00 | -2.00 | 0.00 |
| 3,100.0 | 4.70 | 180.00 | 3,084.2 | -185.4 | 0.0 | -185.3 | 2.00 | -2.00 | 0.00 |
| 3,150.0 | 3.70 | 180.00 | 3,134.0 | -189.0 | 0.0 | -189.0 | 2.00 | -2.00 | 0.00 |
| 3,200.0 | 2.70 | 180.00 | 3,183.9 | -191.8 | 0.0 | -191.8 | 2.00 | -2.00 | 0.00 |
| 3,250.0 | 1.70 | 180.00 | 3,233.9 | -193.7 | 0.0 | -193.7 | 2.00 | -2.00 | 0.00 |
| 3,300.0 | 0.70 | 180.00 | 3,283.9 | -194.8 | 0.0 | -194.7 | 2.00 | -2.00 | 0.00 |
| 3,335.1 | 0.00 | 0.00 | 3,319.0 | -195.0 | 0.0 | -195.0 | 2.00 | -2.00 | 0.00 |
| 3,350.0 | 0.00 | 0.00 | 3,333.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 0.00 | 0.00 | 3,383.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,423.1 | 0.00 | 0.00 | 3,407.0 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| PARKMAN | | | | | | | | | |
| 3,450.0 | 0.00 | 0.00 | 3,433.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 0.00 | 0.00 | 3,483.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,550.0 | 0.00 | 0.00 | 3,533.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 0.00 | 0.00 | 3,583.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,650.0 | 0.00 | 0.00 | 3,633.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 0.00 | 0.00 | 3,683.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,750.0 | 0.00 | 0.00 | 3,733.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 0.00 | 0.00 | 3,783.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,850.0 | 0.00 | 0.00 | 3,833.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 0.00 | 0.00 | 3,883.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 3,950.0 | 0.00 | 0.00 | 3,933.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 0.00 | 0.00 | 3,983.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,050.0 | 0.00 | 0.00 | 4,033.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,093.1 | 0.00 | 0.00 | 4,077.0 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| SUSSEX | | | | | | | | | |
| 4,100.0 | 0.00 | 0.00 | 4,083.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,150.0 | 0.00 | 0.00 | 4,133.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 0.00 | 0.00 | 4,183.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,250.0 | 0.00 | 0.00 | 4,233.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 0.00 | 0.00 | 4,283.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,350.0 | 0.00 | 0.00 | 4,333.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 0.00 | 0.00 | 4,383.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,450.0 | 0.00 | 0.00 | 4,433.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,469.1 | 0.00 | 0.00 | 4,453.0 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| SHANNON | | | | | | | | | |
| 4,500.0 | 0.00 | 0.00 | 4,483.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,550.0 | 0.00 | 0.00 | 4,533.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 0.00 | 0.00 | 4,583.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,650.0 | 0.00 | 0.00 | 4,633.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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) |
| 4,700.0 | 0.00 | 0.00 | 4,683.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,750.0 | 0.00 | 0.00 | 4,733.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 0.00 | 0.00 | 4,783.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,850.0 | 0.00 | 0.00 | 4,833.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,900.0 | 0.00 | 0.00 | 4,883.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 4,950.0 | 0.00 | 0.00 | 4,933.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 0.00 | 0.00 | 4,983.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,050.0 | 0.00 | 0.00 | 5,033.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 0.00 | 0.00 | 5,083.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,150.0 | 0.00 | 0.00 | 5,133.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 0.00 | 0.00 | 5,183.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,250.0 | 0.00 | 0.00 | 5,233.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,288.1 | 0.00 | 0.00 | 5,272.0 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| TEEPEE BUTTES | | | | | | | | | |
| 5,300.0 | 0.00 | 0.00 | 5,283.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,350.0 | 0.00 | 0.00 | 5,333.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 0.00 | 0.00 | 5,383.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,450.0 | 0.00 | 0.00 | 5,433.9 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| 5,481.4 | 0.00 | 0.00 | 5,465.3 | -195.0 | 0.0 | -195.0 | 0.00 | 0.00 | 0.00 |
| KOP #2 - Start Build 8.00 | | | | | | | | | |
| 5,500.0 | 1.49 | 358.77 | 5,483.9 | -194.8 | 0.0 | -194.7 | 8.01 | 8.01 | 0.00 |
| 5,550.0 | 5.49 | 358.77 | 5,533.8 | -191.7 | -0.1 | -191.7 | 8.00 | 8.00 | 0.00 |
| 5,600.0 | 9.49 | 358.77 | 5,583.4 | -185.2 | -0.2 | -185.2 | 8.00 | 8.00 | 0.00 |
| 5,650.0 | 13.49 | 358.77 | 5,632.3 | -175.2 | -0.4 | -175.2 | 8.00 | 8.00 | 0.00 |
| 5,700.0 | 17.49 | 358.77 | 5,680.5 | -161.9 | -0.7 | -161.8 | 8.00 | 8.00 | 0.00 |
| 5,750.0 | 21.49 | 358.77 | 5,727.6 | -145.2 | -1.1 | -145.2 | 8.00 | 8.00 | 0.00 |
| 5,800.0 | 25.49 | 358.77 | 5,773.5 | -125.3 | -1.5 | -125.2 | 8.00 | 8.00 | 0.00 |
| 5,850.0 | 29.49 | 358.77 | 5,817.8 | -102.2 | -2.0 | -102.2 | 8.00 | 8.00 | 0.00 |
| 5,900.0 | 33.49 | 358.77 | 5,860.5 | -76.1 | -2.6 | -76.0 | 8.00 | 8.00 | 0.00 |
| 5,950.0 | 37.49 | 358.77 | 5,901.2 | -47.1 | -3.2 | -47.0 | 8.00 | 8.00 | 0.00 |
| 6,000.0 | 41.49 | 358.77 | 5,939.7 | -15.3 | -3.9 | -15.2 | 8.00 | 8.00 | 0.00 |
| 6,023.4 | 43.36 | 358.77 | 5,957.0 | 0.4 | -4.2 | 0.5 | 8.00 | 8.00 | 0.00 |
| SHARON SPRINGS | | | | | | | | | |
| 6,050.0 | 45.49 | 358.77 | 5,976.0 | 19.1 | -4.6 | 19.2 | 8.00 | 8.00 | 0.00 |
| 6,060.0 | 46.29 | 358.77 | 5,983.0 | 26.3 | -4.8 | 26.4 | 8.00 | 8.00 | 0.00 |
| NIOBRARA - NIO A CHALK | | | | | | | | | |
| 6,100.0 | 49.49 | 358.77 | 6,009.8 | 55.9 | -5.4 | 56.0 | 8.00 | 8.00 | 0.00 |
| 6,101.9 | 49.64 | 358.77 | 6,011.0 | 57.3 | -5.4 | 57.4 | 8.00 | 8.00 | 0.00 |
| NIO A MARL | | | | | | | | | |
| 6,150.0 | 53.49 | 358.77 | 6,040.9 | 95.0 | -6.2 | 95.1 | 8.00 | 8.00 | 0.00 |
| 6,200.0 | 57.49 | 358.77 | 6,069.2 | 136.2 | -7.1 | 136.3 | 8.00 | 8.00 | 0.00 |
| 6,226.4 | 59.60 | 358.77 | 6,083.0 | 158.7 | -7.6 | 158.8 | 8.00 | 8.00 | 0.00 |
| NIO B CHALK | | | | | | | | | |
| 6,250.0 | 61.49 | 358.77 | 6,094.6 | 179.3 | -8.0 | 179.4 | 8.00 | 8.00 | 0.00 |
| 6,288.3 | 64.56 | 358.77 | 6,112.0 | 213.4 | -8.8 | 213.6 | 8.00 | 8.00 | 0.00 |
| NIO B MARL | | | | | | | | | |
| 6,300.0 | 65.49 | 358.77 | 6,116.9 | 224.0 | -9.0 | 224.1 | 8.00 | 8.00 | 0.00 |
| 6,350.0 | 69.49 | 358.77 | 6,136.1 | 270.2 | -10.0 | 270.3 | 8.00 | 8.00 | 0.00 |
| 6,400.0 | 73.49 | 358.77 | 6,151.9 | 317.6 | -11.0 | 317.7 | 8.00 | 8.00 | 0.00 |
| 6,403.8 | 73.79 | 358.77 | 6,153.0 | 321.2 | -11.1 | 321.3 | 8.00 | 8.00 | 0.00 |
| NIO C CHALK | | | | | | | | | |
| 6,450.0 | 77.49 | 358.77 | 6,164.5 | 365.9 | -12.0 | 366.1 | 8.00 | 8.00 | 0.00 |
| 6,500.0 | 81.49 | 358.77 | 6,173.6 | 415.1 | -13.1 | 415.3 | 8.00 | 8.00 | 0.00 |

Noble Energy Inc

Planning Report

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|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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) |
| 6,543.9 | 85.00 | 358.77 | 6,178.7 | 458.7 | -14.0 | 458.9 | 7.99 | 7.99 | 0.00 |
| Start 75.0 hold at 6543.9 MD - 7" Casing @ 6543.9' MD | | | | | | | | | |
| 6,550.0 | 85.00 | 358.77 | 6,179.3 | 464.7 | -14.2 | 464.9 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 85.00 | 358.77 | 6,183.6 | 514.5 | -15.2 | 514.7 | 0.00 | 0.00 | 0.00 |
| 6,618.9 | 85.00 | 358.77 | 6,185.3 | 533.4 | -15.6 | 533.6 | 0.00 | 0.00 | 0.00 |
| Start Build 8.00 | | | | | | | | | |
| 6,650.0 | 87.49 | 358.77 | 6,187.3 | 564.4 | -16.3 | 564.6 | 8.01 | 8.01 | 0.00 |
| 6,681.4 | 90.00 | 358.77 | 6,188.0 | 595.7 | -17.0 | 596.0 | 8.00 | 8.00 | 0.00 |
| 6,700.0 | 90.00 | 358.77 | 6,188.0 | 614.4 | -17.4 | 614.6 | 0.00 | 0.00 | 0.00 |
| 6,750.0 | 90.00 | 358.77 | 6,188.0 | 664.3 | -18.5 | 664.6 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 90.00 | 358.77 | 6,188.0 | 714.3 | -19.5 | 714.6 | 0.00 | 0.00 | 0.00 |
| 6,850.0 | 90.00 | 358.77 | 6,188.0 | 764.3 | -20.6 | 764.6 | 0.00 | 0.00 | 0.00 |
| 6,900.0 | 90.00 | 358.77 | 6,188.0 | 814.3 | -21.7 | 814.6 | 0.00 | 0.00 | 0.00 |
| 6,950.0 | 90.00 | 358.77 | 6,188.0 | 864.3 | -22.8 | 864.6 | 0.00 | 0.00 | 0.00 |
| 7,000.0 | 90.00 | 358.77 | 6,188.0 | 914.3 | -23.8 | 914.6 | 0.00 | 0.00 | 0.00 |
| 7,050.0 | 90.00 | 358.77 | 6,188.0 | 964.3 | -24.9 | 964.6 | 0.00 | 0.00 | 0.00 |
| 7,100.0 | 90.00 | 358.77 | 6,188.0 | 1,014.3 | -26.0 | 1,014.6 | 0.00 | 0.00 | 0.00 |
| 7,150.0 | 90.00 | 358.77 | 6,188.0 | 1,064.3 | -27.1 | 1,064.6 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 90.00 | 358.77 | 6,188.0 | 1,114.2 | -28.1 | 1,114.6 | 0.00 | 0.00 | 0.00 |
| 7,250.0 | 90.00 | 358.77 | 6,188.0 | 1,164.2 | -29.2 | 1,164.6 | 0.00 | 0.00 | 0.00 |
| 7,300.0 | 90.00 | 358.77 | 6,188.0 | 1,214.2 | -30.3 | 1,214.6 | 0.00 | 0.00 | 0.00 |
| 7,350.0 | 90.00 | 358.77 | 6,188.0 | 1,264.2 | -31.3 | 1,264.6 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 90.00 | 358.77 | 6,188.0 | 1,314.2 | -32.4 | 1,314.6 | 0.00 | 0.00 | 0.00 |
| 7,450.0 | 90.00 | 358.77 | 6,188.0 | 1,364.2 | -33.5 | 1,364.6 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 90.00 | 358.77 | 6,188.0 | 1,414.2 | -34.6 | 1,414.6 | 0.00 | 0.00 | 0.00 |
| 7,550.0 | 90.00 | 358.77 | 6,188.0 | 1,464.2 | -35.6 | 1,464.6 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 90.00 | 358.77 | 6,188.0 | 1,514.1 | -36.7 | 1,514.6 | 0.00 | 0.00 | 0.00 |
| 7,650.0 | 90.00 | 358.77 | 6,188.0 | 1,564.1 | -37.8 | 1,564.6 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 90.00 | 358.77 | 6,188.0 | 1,614.1 | -38.9 | 1,614.6 | 0.00 | 0.00 | 0.00 |
| 7,750.0 | 90.00 | 358.77 | 6,188.0 | 1,664.1 | -39.9 | 1,664.6 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 90.00 | 358.77 | 6,188.0 | 1,714.1 | -41.0 | 1,714.6 | 0.00 | 0.00 | 0.00 |
| 7,850.0 | 90.00 | 358.77 | 6,188.0 | 1,764.1 | -42.1 | 1,764.6 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 90.00 | 358.77 | 6,188.0 | 1,814.1 | -43.2 | 1,814.6 | 0.00 | 0.00 | 0.00 |
| 7,950.0 | 90.00 | 358.77 | 6,188.0 | 1,864.1 | -44.2 | 1,864.6 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 90.00 | 358.77 | 6,188.0 | 1,914.1 | -45.3 | 1,914.6 | 0.00 | 0.00 | 0.00 |
| 8,050.0 | 90.00 | 358.77 | 6,188.0 | 1,964.0 | -46.4 | 1,964.6 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 90.00 | 358.77 | 6,188.0 | 2,014.0 | -47.5 | 2,014.6 | 0.00 | 0.00 | 0.00 |
| 8,150.0 | 90.00 | 358.77 | 6,188.0 | 2,064.0 | -48.5 | 2,064.6 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 90.00 | 358.77 | 6,188.0 | 2,114.0 | -49.6 | 2,114.6 | 0.00 | 0.00 | 0.00 |
| 8,250.0 | 90.00 | 358.77 | 6,188.0 | 2,164.0 | -50.7 | 2,164.6 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 90.00 | 358.77 | 6,188.0 | 2,214.0 | -51.7 | 2,214.6 | 0.00 | 0.00 | 0.00 |
| 8,350.0 | 90.00 | 358.77 | 6,188.0 | 2,264.0 | -52.8 | 2,264.6 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 90.00 | 358.77 | 6,188.0 | 2,314.0 | -53.9 | 2,314.6 | 0.00 | 0.00 | 0.00 |
| 8,450.0 | 90.00 | 358.77 | 6,188.0 | 2,364.0 | -55.0 | 2,364.6 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 90.00 | 358.77 | 6,188.0 | 2,413.9 | -56.0 | 2,414.6 | 0.00 | 0.00 | 0.00 |
| 8,550.0 | 90.00 | 358.77 | 6,188.0 | 2,463.9 | -57.1 | 2,464.6 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 90.00 | 358.77 | 6,188.0 | 2,513.9 | -58.2 | 2,514.6 | 0.00 | 0.00 | 0.00 |
| 8,650.0 | 90.00 | 358.77 | 6,188.0 | 2,563.9 | -59.3 | 2,564.6 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 90.00 | 358.77 | 6,188.0 | 2,613.9 | -60.3 | 2,614.6 | 0.00 | 0.00 | 0.00 |
| 8,750.0 | 90.00 | 358.77 | 6,188.0 | 2,663.9 | -61.4 | 2,664.6 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 90.00 | 358.77 | 6,188.0 | 2,713.9 | -62.5 | 2,714.6 | 0.00 | 0.00 | 0.00 |
| 8,850.0 | 90.00 | 358.77 | 6,188.0 | 2,763.9 | -63.6 | 2,764.6 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 90.00 | 358.77 | 6,188.0 | 2,813.8 | -64.6 | 2,814.6 | 0.00 | 0.00 | 0.00 |
| 8,950.0 | 90.00 | 358.77 | 6,188.0 | 2,863.8 | -65.7 | 2,864.6 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

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|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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) | |
| 9,000.0 | 90.00 | 358.77 | 6,188.0 | 2,913.8 | -66.8 | 2,914.6 | 0.00 | 0.00 | 0.00 | |
| 9,050.0 | 90.00 | 358.77 | 6,188.0 | 2,963.8 | -67.9 | 2,964.6 | 0.00 | 0.00 | 0.00 | |
| 9,100.0 | 90.00 | 358.77 | 6,188.0 | 3,013.8 | -68.9 | 3,014.6 | 0.00 | 0.00 | 0.00 | |
| 9,150.0 | 90.00 | 358.77 | 6,188.0 | 3,063.8 | -70.0 | 3,064.6 | 0.00 | 0.00 | 0.00 | |
| 9,200.0 | 90.00 | 358.77 | 6,188.0 | 3,113.8 | -71.1 | 3,114.6 | 0.00 | 0.00 | 0.00 | |
| 9,250.0 | 90.00 | 358.77 | 6,188.0 | 3,163.8 | -72.2 | 3,164.6 | 0.00 | 0.00 | 0.00 | |
| 9,300.0 | 90.00 | 358.77 | 6,188.0 | 3,213.8 | -73.2 | 3,214.6 | 0.00 | 0.00 | 0.00 | |
| 9,350.0 | 90.00 | 358.77 | 6,188.0 | 3,263.7 | -74.3 | 3,264.6 | 0.00 | 0.00 | 0.00 | |
| 9,400.0 | 90.00 | 358.77 | 6,188.0 | 3,313.7 | -75.4 | 3,314.6 | 0.00 | 0.00 | 0.00 | |
| 9,450.0 | 90.00 | 358.77 | 6,188.0 | 3,363.7 | -76.4 | 3,364.6 | 0.00 | 0.00 | 0.00 | |
| 9,500.0 | 90.00 | 358.77 | 6,188.0 | 3,413.7 | -77.5 | 3,414.6 | 0.00 | 0.00 | 0.00 | |
| 9,550.0 | 90.00 | 358.77 | 6,188.0 | 3,463.7 | -78.6 | 3,464.6 | 0.00 | 0.00 | 0.00 | |
| 9,600.0 | 90.00 | 358.77 | 6,188.0 | 3,513.7 | -79.7 | 3,514.6 | 0.00 | 0.00 | 0.00 | |
| 9,650.0 | 90.00 | 358.77 | 6,188.0 | 3,563.7 | -80.7 | 3,564.6 | 0.00 | 0.00 | 0.00 | |
| 9,700.0 | 90.00 | 358.77 | 6,188.0 | 3,613.7 | -81.8 | 3,614.6 | 0.00 | 0.00 | 0.00 | |
| 9,750.0 | 90.00 | 358.77 | 6,188.0 | 3,663.7 | -82.9 | 3,664.6 | 0.00 | 0.00 | 0.00 | |
| 9,800.0 | 90.00 | 358.77 | 6,188.0 | 3,713.6 | -84.0 | 3,714.6 | 0.00 | 0.00 | 0.00 | |
| 9,850.0 | 90.00 | 358.77 | 6,188.0 | 3,763.6 | -85.0 | 3,764.6 | 0.00 | 0.00 | 0.00 | |
| 9,900.0 | 90.00 | 358.77 | 6,188.0 | 3,813.6 | -86.1 | 3,814.6 | 0.00 | 0.00 | 0.00 | |
| 9,950.0 | 90.00 | 358.77 | 6,188.0 | 3,863.6 | -87.2 | 3,864.6 | 0.00 | 0.00 | 0.00 | |
| 10,000.0 | 90.00 | 358.77 | 6,188.0 | 3,913.6 | -88.3 | 3,914.6 | 0.00 | 0.00 | 0.00 | |
| 10,050.0 | 90.00 | 358.77 | 6,188.0 | 3,963.6 | -89.3 | 3,964.6 | 0.00 | 0.00 | 0.00 | |
| 10,100.0 | 90.00 | 358.77 | 6,188.0 | 4,013.6 | -90.4 | 4,014.6 | 0.00 | 0.00 | 0.00 | |
| 10,150.0 | 90.00 | 358.77 | 6,188.0 | 4,063.6 | -91.5 | 4,064.6 | 0.00 | 0.00 | 0.00 | |
| 10,200.0 | 90.00 | 358.77 | 6,188.0 | 4,113.5 | -92.6 | 4,114.6 | 0.00 | 0.00 | 0.00 | |
| 10,250.0 | 90.00 | 358.77 | 6,188.0 | 4,163.5 | -93.6 | 4,164.6 | 0.00 | 0.00 | 0.00 | |
| 10,300.0 | 90.00 | 358.77 | 6,188.0 | 4,213.5 | -94.7 | 4,214.6 | 0.00 | 0.00 | 0.00 | |
| 10,350.0 | 90.00 | 358.77 | 6,188.0 | 4,263.5 | -95.8 | 4,264.6 | 0.00 | 0.00 | 0.00 | |
| 10,400.0 | 90.00 | 358.77 | 6,188.0 | 4,313.5 | -96.8 | 4,314.6 | 0.00 | 0.00 | 0.00 | |
| 10,450.0 | 90.00 | 358.77 | 6,188.0 | 4,363.5 | -97.9 | 4,364.6 | 0.00 | 0.00 | 0.00 | |
| 10,500.0 | 90.00 | 358.77 | 6,188.0 | 4,413.5 | -99.0 | 4,414.6 | 0.00 | 0.00 | 0.00 | |
| 10,550.0 | 90.00 | 358.77 | 6,188.0 | 4,463.5 | -100.1 | 4,464.6 | 0.00 | 0.00 | 0.00 | |
| 10,600.0 | 90.00 | 358.77 | 6,188.0 | 4,513.5 | -101.1 | 4,514.6 | 0.00 | 0.00 | 0.00 | |
| 10,650.0 | 90.00 | 358.77 | 6,188.0 | 4,563.4 | -102.2 | 4,564.6 | 0.00 | 0.00 | 0.00 | |
| 10,700.0 | 90.00 | 358.77 | 6,188.0 | 4,613.4 | -103.3 | 4,614.6 | 0.00 | 0.00 | 0.00 | |
| 10,750.0 | 90.00 | 358.77 | 6,188.0 | 4,663.4 | -104.4 | 4,664.6 | 0.00 | 0.00 | 0.00 | |
| 10,800.0 | 90.00 | 358.77 | 6,188.0 | 4,713.4 | -105.4 | 4,714.6 | 0.00 | 0.00 | 0.00 | |
| 10,850.0 | 90.00 | 358.77 | 6,188.0 | 4,763.4 | -106.5 | 4,764.6 | 0.00 | 0.00 | 0.00 | |
| 10,900.0 | 90.00 | 358.77 | 6,188.0 | 4,813.4 | -107.6 | 4,814.6 | 0.00 | 0.00 | 0.00 | |
| 10,950.0 | 90.00 | 358.77 | 6,188.0 | 4,863.4 | -108.7 | 4,864.6 | 0.00 | 0.00 | 0.00 | |
| 11,000.0 | 90.00 | 358.77 | 6,188.0 | 4,913.4 | -109.7 | 4,914.6 | 0.00 | 0.00 | 0.00 | |
| 11,050.0 | 90.00 | 358.77 | 6,188.0 | 4,963.4 | -110.8 | 4,964.6 | 0.00 | 0.00 | 0.00 | |
| 11,100.0 | 90.00 | 358.77 | 6,188.0 | 5,013.3 | -111.9 | 5,014.6 | 0.00 | 0.00 | 0.00 | |
| 11,150.0 | 90.00 | 358.77 | 6,188.0 | 5,063.3 | -113.0 | 5,064.6 | 0.00 | 0.00 | 0.00 | |
| 11,200.0 | 90.00 | 358.77 | 6,188.0 | 5,113.3 | -114.0 | 5,114.6 | 0.00 | 0.00 | 0.00 | |
| 11,250.0 | 90.00 | 358.77 | 6,188.0 | 5,163.3 | -115.1 | 5,164.6 | 0.00 | 0.00 | 0.00 | |
| 11,300.0 | 90.00 | 358.77 | 6,188.0 | 5,213.3 | -116.2 | 5,214.6 | 0.00 | 0.00 | 0.00 | |
| 11,350.0 | 90.00 | 358.77 | 6,188.0 | 5,263.3 | -117.3 | 5,264.6 | 0.00 | 0.00 | 0.00 | |
| 11,400.0 | 90.00 | 358.77 | 6,188.0 | 5,313.3 | -118.3 | 5,314.6 | 0.00 | 0.00 | 0.00 | |
| 11,450.0 | 90.00 | 358.77 | 6,188.0 | 5,363.3 | -119.4 | 5,364.6 | 0.00 | 0.00 | 0.00 | |
| 11,500.0 | 90.00 | 358.77 | 6,188.0 | 5,413.2 | -120.5 | 5,414.6 | 0.00 | 0.00 | 0.00 | |
| 11,550.0 | 90.00 | 358.77 | 6,188.0 | 5,463.2 | -121.5 | 5,464.6 | 0.00 | 0.00 | 0.00 | |
| 11,600.0 | 90.00 | 358.77 | 6,188.0 | 5,513.2 | -122.6 | 5,514.6 | 0.00 | 0.00 | 0.00 | |
| 11,650.0 | 90.00 | 358.77 | 6,188.0 | 5,563.2 | -123.7 | 5,564.6 | 0.00 | 0.00 | 0.00 | |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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) |
| 11,700.0 | 90.00 | 358.77 | 6,188.0 | 5,613.2 | -124.8 | 5,614.6 | 0.00 | 0.00 | 0.00 |
| 11,750.0 | 90.00 | 358.77 | 6,188.0 | 5,663.2 | -125.8 | 5,664.6 | 0.00 | 0.00 | 0.00 |
| 11,800.0 | 90.00 | 358.77 | 6,188.0 | 5,713.2 | -126.9 | 5,714.6 | 0.00 | 0.00 | 0.00 |
| 11,850.0 | 90.00 | 358.77 | 6,188.0 | 5,763.2 | -128.0 | 5,764.6 | 0.00 | 0.00 | 0.00 |
| 11,900.0 | 90.00 | 358.77 | 6,188.0 | 5,813.2 | -129.1 | 5,814.6 | 0.00 | 0.00 | 0.00 |
| 11,950.0 | 90.00 | 358.77 | 6,188.0 | 5,863.1 | -130.1 | 5,864.6 | 0.00 | 0.00 | 0.00 |
| 12,000.0 | 90.00 | 358.77 | 6,188.0 | 5,913.1 | -131.2 | 5,914.6 | 0.00 | 0.00 | 0.00 |
| 12,050.0 | 90.00 | 358.77 | 6,188.0 | 5,963.1 | -132.3 | 5,964.6 | 0.00 | 0.00 | 0.00 |
| 12,100.0 | 90.00 | 358.77 | 6,188.0 | 6,013.1 | -133.4 | 6,014.6 | 0.00 | 0.00 | 0.00 |
| 12,150.0 | 90.00 | 358.77 | 6,188.0 | 6,063.1 | -134.4 | 6,064.6 | 0.00 | 0.00 | 0.00 |
| 12,200.0 | 90.00 | 358.77 | 6,188.0 | 6,113.1 | -135.5 | 6,114.6 | 0.00 | 0.00 | 0.00 |
| 12,250.0 | 90.00 | 358.77 | 6,188.0 | 6,163.1 | -136.6 | 6,164.6 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 90.00 | 358.77 | 6,188.0 | 6,213.1 | -137.7 | 6,214.6 | 0.00 | 0.00 | 0.00 |
| 12,350.0 | 90.00 | 358.77 | 6,188.0 | 6,263.1 | -138.7 | 6,264.6 | 0.00 | 0.00 | 0.00 |
| 12,400.0 | 90.00 | 358.77 | 6,188.0 | 6,313.0 | -139.8 | 6,314.6 | 0.00 | 0.00 | 0.00 |
| 12,450.0 | 90.00 | 358.77 | 6,188.0 | 6,363.0 | -140.9 | 6,364.6 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 90.00 | 358.77 | 6,188.0 | 6,413.0 | -141.9 | 6,414.6 | 0.00 | 0.00 | 0.00 |
| 12,550.0 | 90.00 | 358.77 | 6,188.0 | 6,463.0 | -143.0 | 6,464.6 | 0.00 | 0.00 | 0.00 |
| 12,600.0 | 90.00 | 358.77 | 6,188.0 | 6,513.0 | -144.1 | 6,514.6 | 0.00 | 0.00 | 0.00 |
| 12,650.0 | 90.00 | 358.77 | 6,188.0 | 6,563.0 | -145.2 | 6,564.6 | 0.00 | 0.00 | 0.00 |
| 12,700.0 | 90.00 | 358.77 | 6,188.0 | 6,613.0 | -146.2 | 6,614.6 | 0.00 | 0.00 | 0.00 |
| 12,750.0 | 90.00 | 358.77 | 6,188.0 | 6,663.0 | -147.3 | 6,664.6 | 0.00 | 0.00 | 0.00 |
| 12,800.0 | 90.00 | 358.77 | 6,188.0 | 6,712.9 | -148.4 | 6,714.6 | 0.00 | 0.00 | 0.00 |
| 12,850.0 | 90.00 | 358.77 | 6,188.0 | 6,762.9 | -149.5 | 6,764.6 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 90.00 | 358.77 | 6,188.0 | 6,812.9 | -150.5 | 6,814.6 | 0.00 | 0.00 | 0.00 |
| 12,950.0 | 90.00 | 358.77 | 6,188.0 | 6,862.9 | -151.6 | 6,864.6 | 0.00 | 0.00 | 0.00 |
| 13,000.0 | 90.00 | 358.77 | 6,188.0 | 6,912.9 | -152.7 | 6,914.6 | 0.00 | 0.00 | 0.00 |
| 13,050.0 | 90.00 | 358.77 | 6,188.0 | 6,962.9 | -153.8 | 6,964.6 | 0.00 | 0.00 | 0.00 |
| 13,100.0 | 90.00 | 358.77 | 6,188.0 | 7,012.9 | -154.8 | 7,014.6 | 0.00 | 0.00 | 0.00 |
| 13,150.0 | 90.00 | 358.77 | 6,188.0 | 7,062.9 | -155.9 | 7,064.6 | 0.00 | 0.00 | 0.00 |
| 13,200.0 | 90.00 | 358.77 | 6,188.0 | 7,112.9 | -157.0 | 7,114.6 | 0.00 | 0.00 | 0.00 |
| 13,250.0 | 90.00 | 358.77 | 6,188.0 | 7,162.8 | -158.1 | 7,164.6 | 0.00 | 0.00 | 0.00 |
| 13,300.0 | 90.00 | 358.77 | 6,188.0 | 7,212.8 | -159.1 | 7,214.6 | 0.00 | 0.00 | 0.00 |
| 13,350.0 | 90.00 | 358.77 | 6,188.0 | 7,262.8 | -160.2 | 7,264.6 | 0.00 | 0.00 | 0.00 |
| 13,400.0 | 90.00 | 358.77 | 6,188.0 | 7,312.8 | -161.3 | 7,314.6 | 0.00 | 0.00 | 0.00 |
| 13,450.0 | 90.00 | 358.77 | 6,188.0 | 7,362.8 | -162.4 | 7,364.6 | 0.00 | 0.00 | 0.00 |
| 13,500.0 | 90.00 | 358.77 | 6,188.0 | 7,412.8 | -163.4 | 7,414.6 | 0.00 | 0.00 | 0.00 |
| 13,550.0 | 90.00 | 358.77 | 6,188.0 | 7,462.8 | -164.5 | 7,464.6 | 0.00 | 0.00 | 0.00 |
| 13,600.0 | 90.00 | 358.77 | 6,188.0 | 7,512.8 | -165.6 | 7,514.6 | 0.00 | 0.00 | 0.00 |
| 13,650.0 | 90.00 | 358.77 | 6,188.0 | 7,562.8 | -166.6 | 7,564.6 | 0.00 | 0.00 | 0.00 |
| 13,700.0 | 90.00 | 358.77 | 6,188.0 | 7,612.7 | -167.7 | 7,614.6 | 0.00 | 0.00 | 0.00 |
| 13,750.0 | 90.00 | 358.77 | 6,188.0 | 7,662.7 | -168.8 | 7,664.6 | 0.00 | 0.00 | 0.00 |
| 13,800.0 | 90.00 | 358.77 | 6,188.0 | 7,712.7 | -169.9 | 7,714.6 | 0.00 | 0.00 | 0.00 |
| 13,850.0 | 90.00 | 358.77 | 6,188.0 | 7,762.7 | -170.9 | 7,764.6 | 0.00 | 0.00 | 0.00 |
| 13,900.0 | 90.00 | 358.77 | 6,188.0 | 7,812.7 | -172.0 | 7,814.6 | 0.00 | 0.00 | 0.00 |
| 13,950.0 | 90.00 | 358.77 | 6,188.0 | 7,862.7 | -173.1 | 7,864.6 | 0.00 | 0.00 | 0.00 |
| 14,000.0 | 90.00 | 358.77 | 6,188.0 | 7,912.7 | -174.2 | 7,914.6 | 0.00 | 0.00 | 0.00 |
| 14,050.0 | 90.00 | 358.77 | 6,188.0 | 7,962.7 | -175.2 | 7,964.6 | 0.00 | 0.00 | 0.00 |
| 14,100.0 | 90.00 | 358.77 | 6,188.0 | 8,012.6 | -176.3 | 8,014.6 | 0.00 | 0.00 | 0.00 |
| 14,150.0 | 90.00 | 358.77 | 6,188.0 | 8,062.6 | -177.4 | 8,064.6 | 0.00 | 0.00 | 0.00 |
| 14,200.0 | 90.00 | 358.77 | 6,188.0 | 8,112.6 | -178.5 | 8,114.6 | 0.00 | 0.00 | 0.00 |
| 14,250.0 | 90.00 | 358.77 | 6,188.0 | 8,162.6 | -179.5 | 8,164.6 | 0.00 | 0.00 | 0.00 |
| 14,300.0 | 90.00 | 358.77 | 6,188.0 | 8,212.6 | -180.6 | 8,214.6 | 0.00 | 0.00 | 0.00 |
| 14,350.0 | 90.00 | 358.77 | 6,188.0 | 8,262.6 | -181.7 | 8,264.6 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | 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) | |
| 14,400.0 | 90.00 | 358.77 | 6,188.0 | 8,312.6 | -182.8 | 8,314.6 | 0.00 | 0.00 | 0.00 | |
| 14,450.0 | 90.00 | 358.77 | 6,188.0 | 8,362.6 | -183.8 | 8,364.6 | 0.00 | 0.00 | 0.00 | |
| 14,500.0 | 90.00 | 358.77 | 6,188.0 | 8,412.6 | -184.9 | 8,414.6 | 0.00 | 0.00 | 0.00 | |
| 14,550.0 | 90.00 | 358.77 | 6,188.0 | 8,462.5 | -186.0 | 8,464.6 | 0.00 | 0.00 | 0.00 | |
| 14,600.0 | 90.00 | 358.77 | 6,188.0 | 8,512.5 | -187.1 | 8,514.6 | 0.00 | 0.00 | 0.00 | |
| 14,650.0 | 90.00 | 358.77 | 6,188.0 | 8,562.5 | -188.1 | 8,564.6 | 0.00 | 0.00 | 0.00 | |
| 14,700.0 | 90.00 | 358.77 | 6,188.0 | 8,612.5 | -189.2 | 8,614.6 | 0.00 | 0.00 | 0.00 | |
| 14,750.0 | 90.00 | 358.77 | 6,188.0 | 8,662.5 | -190.3 | 8,664.6 | 0.00 | 0.00 | 0.00 | |
| 14,800.0 | 90.00 | 358.77 | 6,188.0 | 8,712.5 | -191.3 | 8,714.6 | 0.00 | 0.00 | 0.00 | |
| 14,850.0 | 90.00 | 358.77 | 6,188.0 | 8,762.5 | -192.4 | 8,764.6 | 0.00 | 0.00 | 0.00 | |
| 14,900.0 | 90.00 | 358.77 | 6,188.0 | 8,812.5 | -193.5 | 8,814.6 | 0.00 | 0.00 | 0.00 | |
| 14,950.0 | 90.00 | 358.77 | 6,188.0 | 8,862.5 | -194.6 | 8,864.6 | 0.00 | 0.00 | 0.00 | |
| 15,000.0 | 90.00 | 358.77 | 6,188.0 | 8,912.4 | -195.6 | 8,914.6 | 0.00 | 0.00 | 0.00 | |
| 15,050.0 | 90.00 | 358.77 | 6,188.0 | 8,962.4 | -196.7 | 8,964.6 | 0.00 | 0.00 | 0.00 | |
| 15,100.0 | 90.00 | 358.77 | 6,188.0 | 9,012.4 | -197.8 | 9,014.6 | 0.00 | 0.00 | 0.00 | |
| 15,150.0 | 90.00 | 358.77 | 6,188.0 | 9,062.4 | -198.9 | 9,064.6 | 0.00 | 0.00 | 0.00 | |
| 15,200.0 | 90.00 | 358.77 | 6,188.0 | 9,112.4 | -199.9 | 9,114.6 | 0.00 | 0.00 | 0.00 | |
| 15,250.0 | 90.00 | 358.77 | 6,188.0 | 9,162.4 | -201.0 | 9,164.6 | 0.00 | 0.00 | 0.00 | |
| 15,300.0 | 90.00 | 358.77 | 6,188.0 | 9,212.4 | -202.1 | 9,214.6 | 0.00 | 0.00 | 0.00 | |
| 15,350.0 | 90.00 | 358.77 | 6,188.0 | 9,262.4 | -203.2 | 9,264.6 | 0.00 | 0.00 | 0.00 | |
| 15,400.0 | 90.00 | 358.77 | 6,188.0 | 9,312.3 | -204.2 | 9,314.6 | 0.00 | 0.00 | 0.00 | |
| 15,450.0 | 90.00 | 358.77 | 6,188.0 | 9,362.3 | -205.3 | 9,364.6 | 0.00 | 0.00 | 0.00 | |
| 15,500.0 | 90.00 | 358.77 | 6,188.0 | 9,412.3 | -206.4 | 9,414.6 | 0.00 | 0.00 | 0.00 | |
| 15,550.0 | 90.00 | 358.77 | 6,188.0 | 9,462.3 | -207.5 | 9,464.6 | 0.00 | 0.00 | 0.00 | |
| 15,587.3 | 90.00 | 358.77 | 6,188.0 | 9,499.6 | -208.3 | 9,501.9 | 0.00 | 0.00 | 0.00 | |
| TD at 15587.3 - Tina LC29-73-1HNC BHL 675'FNL, 990'FEL | | | | | | | | | | |

| 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 | | | | | | | | | |
| Tina LC29-73-1HNC BH | 0.00 | 0.00 | 6,188.0 | 9,499.6 | -208.3 | 1,516,437.55 | 3,416,709.06 | 40.741310 | -103.996150 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

| Casing Points | | | | | |
|-----------------------|-----------------------|------------------------|---------------------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 6,543.9 | 6,178.7 | 7" Casing @ 6543.9' MD | 7 | 8-3/4 | |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|--|
| Database: | EDM Production | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site: | LC (09N-59W) | North Reference: | Grid |
| Well: | Tina LC29-73-1HNC | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Formations | | | | | | |
|-----------------------|-----------------------|----------------|-----------|---------|-------------------|--|
| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 1,276.0 | 1,276.0 | PIERRE | | 0.00 | | |
| 3,423.1 | 3,407.0 | PARKMAN | | 0.00 | | |
| 4,093.1 | 4,077.0 | SUSSEX | | 0.00 | | |
| 4,469.1 | 4,453.0 | SHANNON | | 0.00 | | |
| 5,288.1 | 5,272.0 | TEEPEE BUTTES | | 0.00 | | |
| 6,023.4 | 5,957.0 | SHARON SPRINGS | | 0.00 | | |
| 6,060.0 | 5,983.0 | NIOBRARA | | 0.00 | | |
| 6,060.0 | 5,983.0 | NIO A CHALK | | 0.00 | | |
| 6,101.9 | 6,011.0 | NIO A MARL | | 0.00 | | |
| 6,226.4 | 6,083.0 | NIO B CHALK | | 0.00 | | |
| 6,288.3 | 6,112.0 | NIO B MARL | | 0.00 | | |
| 6,403.8 | 6,153.0 | 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 | |
| 2,734.0 | 2,722.3 | -132.2 | 0.0 | Start Drop -2.00 | |
| 5,481.4 | 5,465.3 | -195.0 | 0.0 | KOP #2 - Start Build 8.00 | |
| 6,543.9 | 6,178.7 | 458.7 | -14.0 | Start 75.0 hold at 6543.9 MD | |
| 6,618.9 | 6,185.3 | 533.4 | -15.6 | Start Build 8.00 | |
| 15,587.3 | 6,188.0 | 9,499.6 | -208.3 | TD at 15587.3 | |

Northern Region Drilling - Working

Wattenberg Field

LC (09N-59W)

Tina LC29-73-1HNC

Original Drilling

APD - Rev 0

Anticollision Summary Report

27 August, 2013

Noble Energy Inc
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|--|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Project: | Wattenberg Field | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Reference Site: | LC (09N-59W) | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site Error: | 0.0 usft | North Reference: | Grid |
| Reference Well: | Tina LC29-73-1HNC | 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 | 8/27/2013 | | |
| From (usft) | To (usft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 15,587.1 | 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) | | | | | | |
| Ptasnik LC29-72HN - Original Drilling - As Drilled | 9,148.1 | 9,285.9 | 259.4 | 227.0 | 8.012 | CC |
| Ptasnik LC29-72HN - Original Drilling - As Drilled | 9,200.0 | 9,333.9 | 259.8 | 227.0 | 7.915 | ES |
| Ptasnik LC29-72HN - Original Drilling - As Drilled | 9,900.0 | 10,019.9 | 283.5 | 244.6 | 7.293 | SF |
| Rico LC29-72-1HNA - Original Drilling - APD - Rev 0 | 1,200.0 | 1,200.0 | 38.8 | 33.7 | 7.587 | CC, ES |
| Rico LC29-72-1HNA - Original Drilling - APD - Rev 0 | 1,300.0 | 1,298.7 | 40.5 | 34.9 | 7.297 | SF |
| Trisha LC29-73HNB - Original Drilling - APD - Rev 0 | 1,466.0 | 1,468.0 | 36.0 | 29.7 | 5.706 | CC |
| Trisha LC29-73HNB - Original Drilling - APD - Rev 0 | 1,500.0 | 1,502.0 | 36.0 | 29.6 | 5.572 | ES |
| Trisha LC29-73HNB - Original Drilling - APD - Rev 0 | 15,587.3 | 15,530.3 | 338.0 | 151.5 | 1.812 | Level 3, SF |

Noble Energy Inc

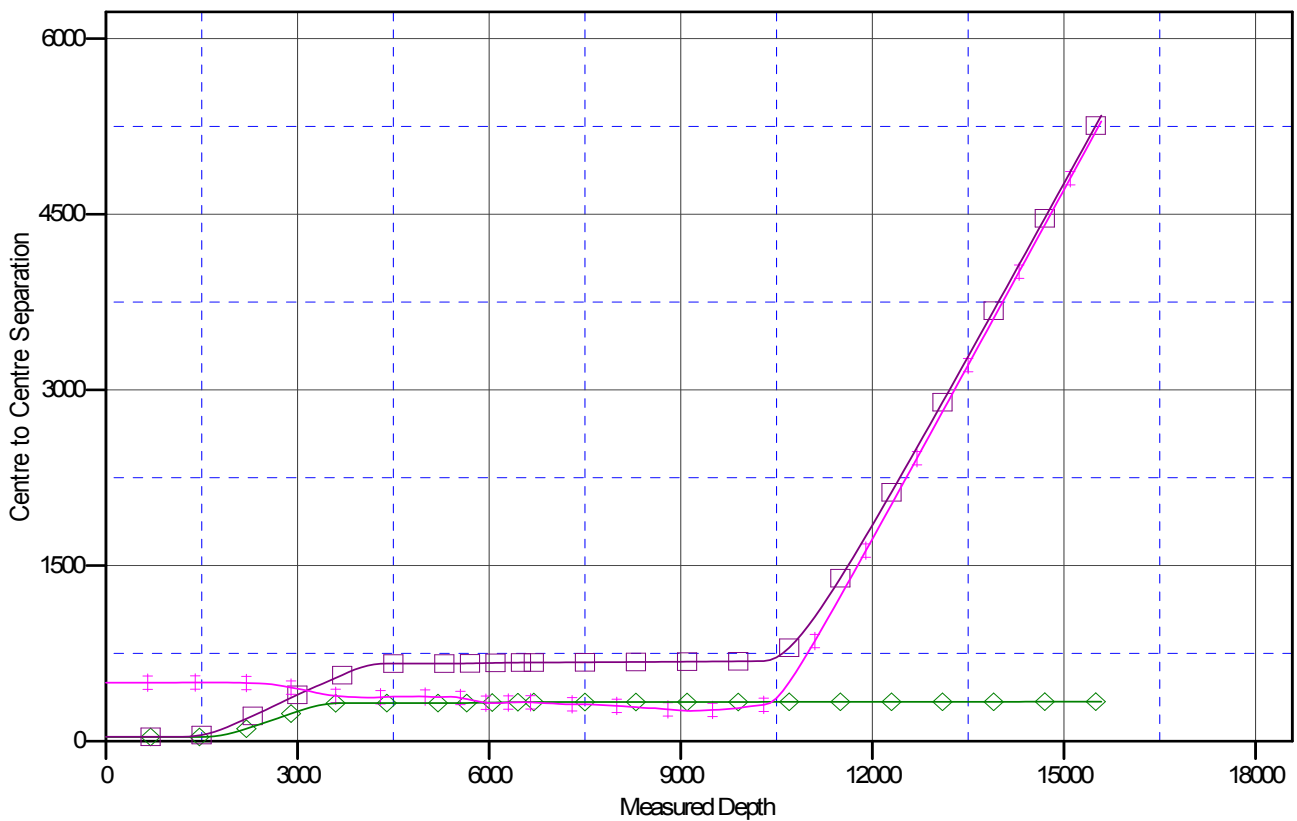
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|--|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Project: | Wattenberg Field | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Reference Site: | LC (09N-59W) | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site Error: | 0.0 usft | North Reference: | Grid |
| Reference Well: | Tina LC29-73-1HNC | 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 @ 4889.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Tina LC29-73-1HNC
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.97°

Ladder Plot



LEGEND

Tina LC29-73HNB, Original Drilling, APD - Rev0 V0 Rico LC29-72-1HNA, Original Drilling, APD - Rev0 V0 Ptasnik LC29-72HN, Original Drilling, As Drilled

Noble Energy Inc
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|--|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Tina LC29-73-1HNC |
| Project: | Wattenberg Field | TVD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Reference Site: | LC (09N-59W) | MD Reference: | WELL @ 4889.0usft (Original Well Elev) |
| Site Error: | 0.0 usft | North Reference: | Grid |
| Reference Well: | Tina LC29-73-1HNC | 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 @ 4889.0usft (Original Well Ele
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Tina LC29-73-1HNC
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.97°

