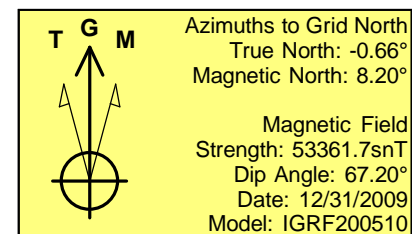
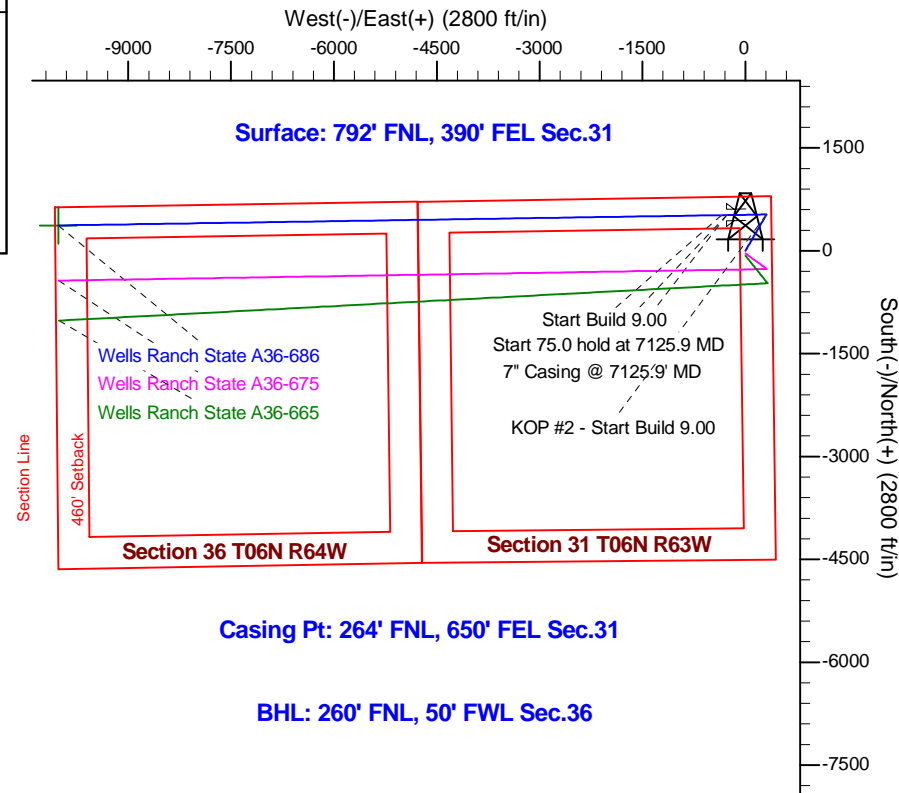
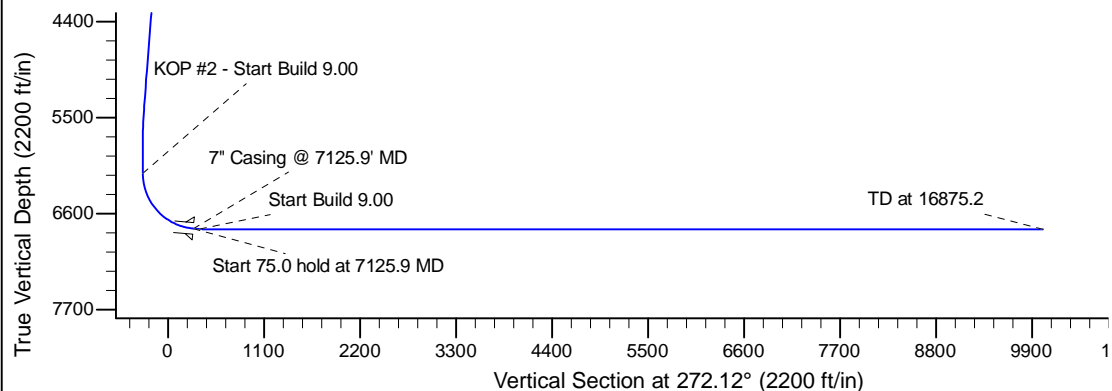
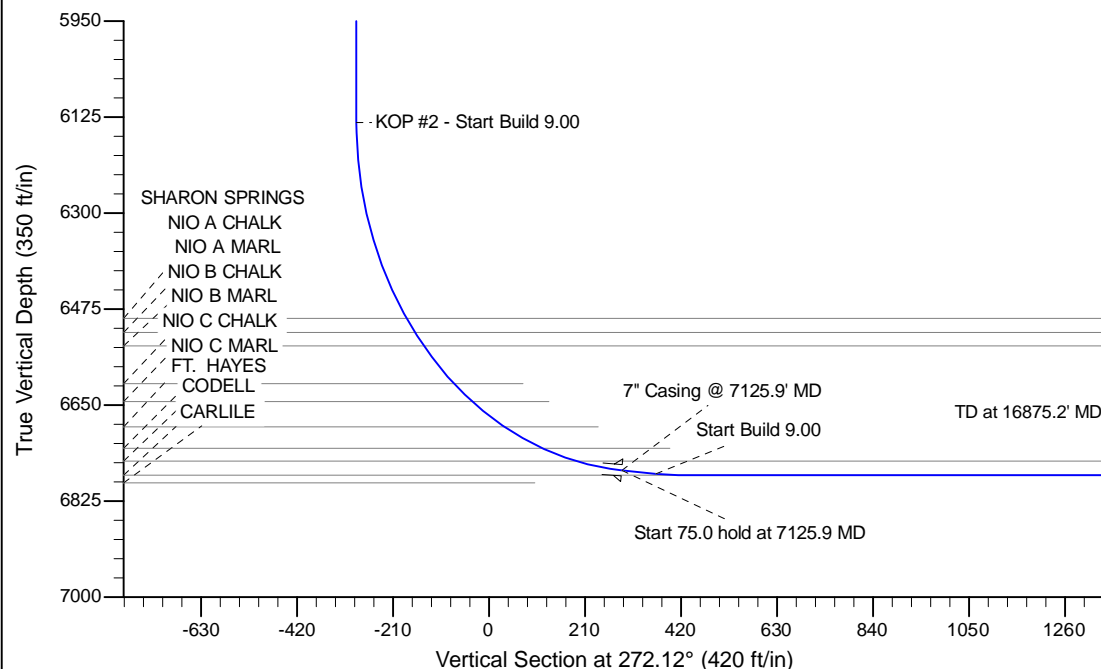


Project: Wattenberg Field
Site: A (Sec.31-T06N-R63W) Weld County, CO
Well: Wells Ranch State A36-686
Wellbore: Original Drilling
Design: APD - Rev 0

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 | 1500.0 | 0.00 | 0.00 | 1500.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 1951.6 | 9.03 | 30.32 | 1949.8 | 30.7 | 17.9 | 2.00 | 30.32 | -16.8 | |
| 4 | 5410.0 | 9.03 | 30.32 | 5365.2 | 499.3 | 292.1 | 0.00 | 0.00 | -273.4 | |
| 5 | 5861.6 | 0.00 | 0.00 | 5815.0 | 530.0 | 310.0 | 2.00 | 180.00 | -290.2 | |
| 6 | 6181.5 | 0.00 | 0.00 | 6134.8 | 530.0 | 310.0 | 0.00 | 0.00 | -290.2 | |
| 7 | 7125.9 | 85.00 | 269.11 | 6769.0 | 521.0 | -271.1 | 9.00 | 269.11 | 290.1 | |
| 8 | 7200.9 | 85.00 | 269.11 | 6775.6 | 519.9 | -345.8 | 0.00 | 0.00 | 364.7 | |
| 9 | 7256.5 | 90.00 | 269.11 | 6778.0 | 519.0 | -401.3 | 9.00 | 0.00 | 420.2 | |
| 10 | 16875.2 | 90.00 | 269.11 | 6778.0 | 370.4 | -10018.9 | 0.00 | 0.00 | 10025.7 | Wells Ranch State A36-686 BHL 260°FNL, 50°FWL |



| | | | | |
|---|-----|------------------------|------------------------------|--------------------------|
| WELL DETAILS: Wells Ranch State A36-686 | | | | |
| Ground Level: 4656.0 | | | | |
| 0.0 | 0.0 | Northing 1407739.06 | Easting 3286199.33 | Latitude 40.448090 |
| | | | | Longitude -104.471640 |
| Plan: APD - Rev 0 (Wells Ranch State A36-686/Original Drilling) | | | | |
| Created By: Shailey Jewell | | | Date: 10:33, January 23 2015 | |
| Checked: _____ | | | Date: _____ | |
| Reviewed: _____ | | | Date: _____ | |
| Approved: _____ | | | Date: _____ | |

Northern Region Drilling - Working

Wattenberg Field

A (06N-64W)

Wells Ranch State A36-686

Original Drilling

Plan: APD - Rev 0

Standard Planning Report

23 January, 2015

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | 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 | | A (06N-64W) | | | |
| Site Position: | | Northing: | 1,408,077.93 usft | Latitude: | 40.449320 |
| From: | Lat/Long | Easting: | 3,276,618.19 usft | Longitude: | -104.506050 |
| Position Uncertainty: | 0.0 ft | Slot Radius: | 13-3/16 " | Grid Convergence: | 0.64 ° |

| Well | Wells Ranch State A36-686 | | | | | |
|----------------------|---------------------------|------------|---------------------|-------------------|---------------|-------------|
| Well Position | +N/-S | -338.9 ft | Northing: | 1,407,739.06 usft | Latitude: | 40.448090 |
| | +E/-W | 9,581.5 ft | Easting: | 3,286,199.33 usft | Longitude: | -104.471640 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | 0.0 ft | Ground Level: | 4,656.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Original Drilling | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 12/31/2009 | 8.87 | 67.20 | 53,362 |

| | | | | |
|--------------------------|-------------------------|--------------|----------------------|------------------|
| Design | APD - Rev 0 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) | +N/-S | +E/-W | Direction |
| | (ft) | (ft) | (ft) | (°) |
| | 0.0 | 0.0 | 0.0 | 272.12 |

| Plan Sections | | | | | | | | | | |
|----------------------|-----------------|-------------|---------------------|------------|------------|-------------------------|------------------------|-----------------------|---------|----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | 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 | |
| 1,500.0 | 0.00 | 0.00 | 1,500.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,951.6 | 9.03 | 30.32 | 1,949.8 | 30.7 | 17.9 | 2.00 | 2.00 | 0.00 | 30.32 | |
| 5,410.0 | 9.03 | 30.32 | 5,365.2 | 499.3 | 292.1 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,861.6 | 0.00 | 0.00 | 5,815.0 | 530.0 | 310.0 | 2.00 | -2.00 | 0.00 | 180.00 | |
| 6,181.5 | 0.00 | 0.00 | 6,134.8 | 530.0 | 310.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,125.9 | 85.00 | 269.11 | 6,769.0 | 521.0 | -271.1 | 9.00 | 9.00 | 0.00 | 269.11 | |
| 7,200.9 | 85.00 | 269.11 | 6,775.6 | 519.9 | -345.8 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,256.5 | 90.00 | 269.11 | 6,778.0 | 519.0 | -401.3 | 9.00 | 9.00 | 0.00 | 0.00 | |
| 16,875.2 | 90.00 | 269.11 | 6,778.0 | 370.4 | -10,018.9 | 0.00 | 0.00 | 0.00 | 0.00 | Wells Ranch State A3 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|-------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | 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 |
| 1,400.0 | 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 |
| KOP - Start Build 2.00 | | | | | | | | | |
| 1,550.0 | 1.00 | 30.32 | 1,550.0 | 0.4 | 0.2 | -0.2 | 2.00 | 2.00 | 0.00 |
| 1,600.0 | 2.00 | 30.32 | 1,600.0 | 1.5 | 0.9 | -0.8 | 2.00 | 2.00 | 0.00 |
| 1,650.0 | 3.00 | 30.32 | 1,649.9 | 3.4 | 2.0 | -1.9 | 2.00 | 2.00 | 0.00 |
| 1,700.0 | 4.00 | 30.32 | 1,699.8 | 6.0 | 3.5 | -3.3 | 2.00 | 2.00 | 0.00 |
| 1,750.0 | 5.00 | 30.32 | 1,749.7 | 9.4 | 5.5 | -5.2 | 2.00 | 2.00 | 0.00 |
| 1,800.0 | 6.00 | 30.32 | 1,799.5 | 13.5 | 7.9 | -7.4 | 2.00 | 2.00 | 0.00 |
| 1,850.0 | 7.00 | 30.32 | 1,849.1 | 18.4 | 10.8 | -10.1 | 2.00 | 2.00 | 0.00 |
| 1,900.0 | 8.00 | 30.32 | 1,898.7 | 24.1 | 14.1 | -13.2 | 2.00 | 2.00 | 0.00 |
| 1,950.0 | 9.00 | 30.32 | 1,948.2 | 30.4 | 17.8 | -16.7 | 2.00 | 2.00 | 0.00 |
| 1,951.6 | 9.03 | 30.32 | 1,949.8 | 30.7 | 17.9 | -16.8 | 2.00 | 2.00 | 0.00 |
| 2,000.0 | 9.03 | 30.32 | 1,997.5 | 37.2 | 21.8 | -20.4 | 0.00 | 0.00 | 0.00 |
| 2,050.0 | 9.03 | 30.32 | 2,046.9 | 44.0 | 25.7 | -24.1 | 0.00 | 0.00 | 0.00 |
| 2,100.0 | 9.03 | 30.32 | 2,096.3 | 50.8 | 29.7 | -27.8 | 0.00 | 0.00 | 0.00 |
| 2,150.0 | 9.03 | 30.32 | 2,145.7 | 57.5 | 33.7 | -31.5 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 9.03 | 30.32 | 2,195.1 | 64.3 | 37.6 | -35.2 | 0.00 | 0.00 | 0.00 |
| 2,250.0 | 9.03 | 30.32 | 2,244.4 | 71.1 | 41.6 | -38.9 | 0.00 | 0.00 | 0.00 |
| 2,300.0 | 9.03 | 30.32 | 2,293.8 | 77.9 | 45.6 | -42.6 | 0.00 | 0.00 | 0.00 |
| 2,350.0 | 9.03 | 30.32 | 2,343.2 | 84.7 | 49.5 | -46.4 | 0.00 | 0.00 | 0.00 |
| 2,378.2 | 9.03 | 30.32 | 2,371.0 | 88.5 | 51.7 | -48.4 | 0.00 | 0.00 | 0.00 |
| PIERRE | | | | | | | | | |
| 2,400.0 | 9.03 | 30.32 | 2,392.6 | 91.4 | 53.5 | -50.1 | 0.00 | 0.00 | 0.00 |
| 2,450.0 | 9.03 | 30.32 | 2,442.0 | 98.2 | 57.4 | -53.8 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 2,500.0 | 9.03 | 30.32 | 2,491.3 | 105.0 | 61.4 | -57.5 | 0.00 | 0.00 | 0.00 |
| 2,550.0 | 9.03 | 30.32 | 2,540.7 | 111.8 | 65.4 | -61.2 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 9.03 | 30.32 | 2,590.1 | 118.5 | 69.3 | -64.9 | 0.00 | 0.00 | 0.00 |
| 2,650.0 | 9.03 | 30.32 | 2,639.5 | 125.3 | 73.3 | -68.6 | 0.00 | 0.00 | 0.00 |
| 2,700.0 | 9.03 | 30.32 | 2,688.9 | 132.1 | 77.3 | -72.3 | 0.00 | 0.00 | 0.00 |
| 2,750.0 | 9.03 | 30.32 | 2,738.2 | 138.9 | 81.2 | -76.0 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 9.03 | 30.32 | 2,787.6 | 145.6 | 85.2 | -79.7 | 0.00 | 0.00 | 0.00 |
| 2,850.0 | 9.03 | 30.32 | 2,837.0 | 152.4 | 89.1 | -83.5 | 0.00 | 0.00 | 0.00 |
| 2,900.0 | 9.03 | 30.32 | 2,886.4 | 159.2 | 93.1 | -87.2 | 0.00 | 0.00 | 0.00 |
| 2,950.0 | 9.03 | 30.32 | 2,935.8 | 166.0 | 97.1 | -90.9 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 9.03 | 30.32 | 2,985.1 | 172.7 | 101.0 | -94.6 | 0.00 | 0.00 | 0.00 |
| 3,050.0 | 9.03 | 30.32 | 3,034.5 | 179.5 | 105.0 | -98.3 | 0.00 | 0.00 | 0.00 |
| 3,100.0 | 9.03 | 30.32 | 3,083.9 | 186.3 | 109.0 | -102.0 | 0.00 | 0.00 | 0.00 |
| 3,150.0 | 9.03 | 30.32 | 3,133.3 | 193.1 | 112.9 | -105.7 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 9.03 | 30.32 | 3,182.7 | 199.8 | 116.9 | -109.4 | 0.00 | 0.00 | 0.00 |
| 3,250.0 | 9.03 | 30.32 | 3,232.0 | 206.6 | 120.9 | -113.1 | 0.00 | 0.00 | 0.00 |
| 3,300.0 | 9.03 | 30.32 | 3,281.4 | 213.4 | 124.8 | -116.8 | 0.00 | 0.00 | 0.00 |
| 3,350.0 | 9.03 | 30.32 | 3,330.8 | 220.2 | 128.8 | -120.6 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 9.03 | 30.32 | 3,380.2 | 226.9 | 132.7 | -124.3 | 0.00 | 0.00 | 0.00 |
| 3,450.0 | 9.03 | 30.32 | 3,429.6 | 233.7 | 136.7 | -128.0 | 0.00 | 0.00 | 0.00 |
| 3,500.0 | 9.03 | 30.32 | 3,478.9 | 240.5 | 140.7 | -131.7 | 0.00 | 0.00 | 0.00 |
| 3,533.5 | 9.03 | 30.32 | 3,512.0 | 245.0 | 143.3 | -134.2 | 0.00 | 0.00 | 0.00 |
| PARKMAN | | | | | | | | | |
| 3,550.0 | 9.03 | 30.32 | 3,528.3 | 247.3 | 144.6 | -135.4 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 9.03 | 30.32 | 3,577.7 | 254.0 | 148.6 | -139.1 | 0.00 | 0.00 | 0.00 |
| 3,650.0 | 9.03 | 30.32 | 3,627.1 | 260.8 | 152.6 | -142.8 | 0.00 | 0.00 | 0.00 |
| 3,700.0 | 9.03 | 30.32 | 3,676.5 | 267.6 | 156.5 | -146.5 | 0.00 | 0.00 | 0.00 |
| 3,750.0 | 9.03 | 30.32 | 3,725.8 | 274.4 | 160.5 | -150.2 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 9.03 | 30.32 | 3,775.2 | 281.2 | 164.4 | -153.9 | 0.00 | 0.00 | 0.00 |
| 3,850.0 | 9.03 | 30.32 | 3,824.6 | 287.9 | 168.4 | -157.7 | 0.00 | 0.00 | 0.00 |
| 3,900.0 | 9.03 | 30.32 | 3,874.0 | 294.7 | 172.4 | -161.4 | 0.00 | 0.00 | 0.00 |
| 3,950.0 | 9.03 | 30.32 | 3,923.4 | 301.5 | 176.3 | -165.1 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 9.03 | 30.32 | 3,972.7 | 308.3 | 180.3 | -168.8 | 0.00 | 0.00 | 0.00 |
| 4,050.0 | 9.03 | 30.32 | 4,022.1 | 315.0 | 184.3 | -172.5 | 0.00 | 0.00 | 0.00 |
| 4,100.0 | 9.03 | 30.32 | 4,071.5 | 321.8 | 188.2 | -176.2 | 0.00 | 0.00 | 0.00 |
| 4,150.0 | 9.03 | 30.32 | 4,120.9 | 328.6 | 192.2 | -179.9 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 9.03 | 30.32 | 4,170.3 | 335.4 | 196.2 | -183.6 | 0.00 | 0.00 | 0.00 |
| 4,250.0 | 9.03 | 30.32 | 4,219.6 | 342.1 | 200.1 | -187.3 | 0.00 | 0.00 | 0.00 |
| 4,300.0 | 9.03 | 30.32 | 4,269.0 | 348.9 | 204.1 | -191.1 | 0.00 | 0.00 | 0.00 |
| 4,312.1 | 9.03 | 30.32 | 4,281.0 | 350.6 | 205.0 | -192.0 | 0.00 | 0.00 | 0.00 |
| SUSSEX | | | | | | | | | |
| 4,350.0 | 9.03 | 30.32 | 4,318.4 | 355.7 | 208.0 | -194.8 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 9.03 | 30.32 | 4,367.8 | 362.5 | 212.0 | -198.5 | 0.00 | 0.00 | 0.00 |
| 4,450.0 | 9.03 | 30.32 | 4,417.2 | 369.2 | 216.0 | -202.2 | 0.00 | 0.00 | 0.00 |
| 4,500.0 | 9.03 | 30.32 | 4,466.5 | 376.0 | 219.9 | -205.9 | 0.00 | 0.00 | 0.00 |
| 4,550.0 | 9.03 | 30.32 | 4,515.9 | 382.8 | 223.9 | -209.6 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 9.03 | 30.32 | 4,565.3 | 389.6 | 227.9 | -213.3 | 0.00 | 0.00 | 0.00 |
| 4,650.0 | 9.03 | 30.32 | 4,614.7 | 396.3 | 231.8 | -217.0 | 0.00 | 0.00 | 0.00 |
| 4,700.0 | 9.03 | 30.32 | 4,664.1 | 403.1 | 235.8 | -220.7 | 0.00 | 0.00 | 0.00 |
| 4,750.0 | 9.03 | 30.32 | 4,713.4 | 409.9 | 239.8 | -224.4 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 9.03 | 30.32 | 4,762.8 | 416.7 | 243.7 | -228.2 | 0.00 | 0.00 | 0.00 |
| 4,850.0 | 9.03 | 30.32 | 4,812.2 | 423.4 | 247.7 | -231.9 | 0.00 | 0.00 | 0.00 |
| 4,890.3 | 9.03 | 30.32 | 4,852.0 | 428.9 | 250.9 | -234.9 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

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|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|----------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| SHANNON | | | | | | | | | |
| 4,900.0 | 9.03 | 30.32 | 4,861.6 | 430.2 | 251.6 | -235.6 | 0.00 | 0.00 | 0.00 |
| 4,950.0 | 9.03 | 30.32 | 4,911.0 | 437.0 | 255.6 | -239.3 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 9.03 | 30.32 | 4,960.3 | 443.8 | 259.6 | -243.0 | 0.00 | 0.00 | 0.00 |
| 5,050.0 | 9.03 | 30.32 | 5,009.7 | 450.6 | 263.5 | -246.7 | 0.00 | 0.00 | 0.00 |
| 5,100.0 | 9.03 | 30.32 | 5,059.1 | 457.3 | 267.5 | -250.4 | 0.00 | 0.00 | 0.00 |
| 5,150.0 | 9.03 | 30.32 | 5,108.5 | 464.1 | 271.5 | -254.1 | 0.00 | 0.00 | 0.00 |
| 5,200.0 | 9.03 | 30.32 | 5,157.9 | 470.9 | 275.4 | -257.8 | 0.00 | 0.00 | 0.00 |
| 5,250.0 | 9.03 | 30.32 | 5,207.2 | 477.7 | 279.4 | -261.5 | 0.00 | 0.00 | 0.00 |
| 5,300.0 | 9.03 | 30.32 | 5,256.6 | 484.4 | 283.3 | -265.3 | 0.00 | 0.00 | 0.00 |
| 5,350.0 | 9.03 | 30.32 | 5,306.0 | 491.2 | 287.3 | -269.0 | 0.00 | 0.00 | 0.00 |
| 5,400.0 | 9.03 | 30.32 | 5,355.4 | 498.0 | 291.3 | -272.7 | 0.00 | 0.00 | 0.00 |
| 5,410.0 | 9.03 | 30.32 | 5,365.2 | 499.3 | 292.1 | -273.4 | 0.00 | 0.00 | 0.00 |
| Start Drop -2.00 | | | | | | | | | |
| 5,450.0 | 8.23 | 30.32 | 5,404.8 | 504.5 | 295.1 | -276.3 | 2.00 | -2.00 | 0.00 |
| 5,500.0 | 7.23 | 30.32 | 5,454.3 | 510.3 | 298.5 | -279.4 | 2.00 | -2.00 | 0.00 |
| 5,550.0 | 6.23 | 30.32 | 5,504.0 | 515.4 | 301.5 | -282.2 | 2.00 | -2.00 | 0.00 |
| 5,600.0 | 5.23 | 30.32 | 5,553.8 | 519.7 | 304.0 | -284.6 | 2.00 | -2.00 | 0.00 |
| 5,650.0 | 4.23 | 30.32 | 5,603.6 | 523.3 | 306.1 | -286.5 | 2.00 | -2.00 | 0.00 |
| 5,700.0 | 3.23 | 30.32 | 5,653.5 | 526.1 | 307.7 | -288.1 | 2.00 | -2.00 | 0.00 |
| 5,750.0 | 2.23 | 30.32 | 5,703.4 | 528.1 | 308.9 | -289.2 | 2.00 | -2.00 | 0.00 |
| 5,800.0 | 1.23 | 30.32 | 5,753.4 | 529.4 | 309.7 | -289.9 | 2.00 | -2.00 | 0.00 |
| 5,850.0 | 0.23 | 30.32 | 5,803.4 | 530.0 | 310.0 | -290.2 | 2.00 | -2.00 | 0.00 |
| 5,861.6 | 0.00 | 0.00 | 5,815.0 | 530.0 | 310.0 | -290.2 | 2.00 | -2.00 | 0.00 |
| 5,865.6 | 0.00 | 0.00 | 5,819.0 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| TEEPEE BUTTES | | | | | | | | | |
| 5,900.0 | 0.00 | 0.00 | 5,853.4 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| 5,950.0 | 0.00 | 0.00 | 5,903.4 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| 6,000.0 | 0.00 | 0.00 | 5,953.4 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| 6,050.0 | 0.00 | 0.00 | 6,003.4 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| 6,100.0 | 0.00 | 0.00 | 6,053.4 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| 6,150.0 | 0.00 | 0.00 | 6,103.4 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| 6,181.5 | 0.00 | 0.00 | 6,134.9 | 530.0 | 310.0 | -290.2 | 0.00 | 0.00 | 0.00 |
| KOP #2 - Start Build 9.00 | | | | | | | | | |
| 6,200.0 | 1.67 | 269.11 | 6,153.4 | 530.0 | 309.7 | -289.9 | 9.01 | 9.01 | 0.00 |
| 6,250.0 | 6.17 | 269.11 | 6,203.3 | 529.9 | 306.3 | -286.5 | 9.00 | 9.00 | 0.00 |
| 6,300.0 | 10.67 | 269.11 | 6,252.7 | 529.8 | 299.0 | -279.2 | 9.00 | 9.00 | 0.00 |
| 6,350.0 | 15.17 | 269.11 | 6,301.4 | 529.7 | 287.8 | -268.1 | 9.00 | 9.00 | 0.00 |
| 6,400.0 | 19.67 | 269.11 | 6,349.1 | 529.4 | 272.9 | -253.1 | 9.00 | 9.00 | 0.00 |
| 6,450.0 | 24.17 | 269.11 | 6,395.5 | 529.1 | 254.2 | -234.5 | 9.00 | 9.00 | 0.00 |
| 6,500.0 | 28.67 | 269.11 | 6,440.3 | 528.8 | 232.0 | -212.3 | 9.00 | 9.00 | 0.00 |
| 6,550.0 | 33.17 | 269.11 | 6,483.1 | 528.4 | 206.3 | -186.6 | 9.00 | 9.00 | 0.00 |
| 6,560.6 | 34.13 | 269.11 | 6,492.0 | 528.3 | 200.4 | -180.7 | 9.01 | 9.01 | 0.00 |
| SHARON SPRINGS | | | | | | | | | |
| 6,592.6 | 37.00 | 269.11 | 6,518.0 | 528.0 | 181.8 | -162.2 | 9.00 | 9.00 | 0.00 |
| NIO A CHALK | | | | | | | | | |
| 6,600.0 | 37.67 | 269.11 | 6,523.9 | 527.9 | 177.3 | -157.7 | 8.98 | 8.98 | 0.00 |
| 6,623.2 | 39.76 | 269.11 | 6,542.0 | 527.7 | 162.8 | -143.2 | 9.01 | 9.01 | 0.00 |
| NIO A MARL | | | | | | | | | |
| 6,650.0 | 42.17 | 269.11 | 6,562.2 | 527.5 | 145.2 | -125.7 | 9.00 | 9.00 | 0.00 |
| 6,700.0 | 46.67 | 269.11 | 6,597.9 | 526.9 | 110.3 | -90.7 | 9.00 | 9.00 | 0.00 |
| 6,719.4 | 48.41 | 269.11 | 6,611.0 | 526.7 | 96.0 | -76.4 | 9.01 | 9.01 | 0.00 |
| NIO B CHALK | | | | | | | | | |

Noble Energy Inc

Planning Report

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|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 6,750.0 | 51.17 | 269.11 | 6,630.8 | 526.3 | 72.6 | -53.1 | 9.00 | 9.00 | 0.00 |
| 6,771.6 | 53.11 | 269.11 | 6,644.0 | 526.1 | 55.6 | -36.1 | 9.01 | 9.01 | 0.00 |
| NIO B MARL | | | | | | | | | |
| 6,800.0 | 55.67 | 269.11 | 6,660.6 | 525.7 | 32.4 | -13.0 | 9.00 | 9.00 | 0.00 |
| 6,850.0 | 60.17 | 269.11 | 6,687.1 | 525.1 | -9.9 | 29.3 | 9.00 | 9.00 | 0.00 |
| 6,855.9 | 60.70 | 269.11 | 6,690.0 | 525.0 | -15.0 | 34.4 | 9.02 | 9.02 | 0.00 |
| NIO C CHALK | | | | | | | | | |
| 6,900.0 | 64.67 | 269.11 | 6,710.3 | 524.4 | -54.2 | 73.5 | 9.00 | 9.00 | 0.00 |
| 6,947.6 | 68.96 | 269.11 | 6,729.0 | 523.7 | -98.0 | 117.2 | 9.00 | 9.00 | 0.00 |
| NIO C MARL | | | | | | | | | |
| 6,950.0 | 69.17 | 269.11 | 6,729.9 | 523.7 | -100.2 | 119.5 | 8.95 | 8.95 | 0.00 |
| 7,000.0 | 73.67 | 269.11 | 6,745.8 | 522.9 | -147.6 | 166.8 | 9.00 | 9.00 | 0.00 |
| 7,023.6 | 75.80 | 269.11 | 6,752.0 | 522.6 | -170.4 | 189.5 | 9.01 | 9.01 | 0.00 |
| FT. HAYES | | | | | | | | | |
| 7,050.0 | 78.17 | 269.11 | 6,757.9 | 522.2 | -196.0 | 215.2 | 9.00 | 9.00 | 0.00 |
| 7,100.0 | 82.67 | 269.11 | 6,766.3 | 521.4 | -245.3 | 264.4 | 9.00 | 9.00 | 0.00 |
| 7,125.9 | 85.00 | 269.11 | 6,769.0 | 521.0 | -271.1 | 290.1 | 9.00 | 9.00 | 0.00 |
| Start 75.0 hold at 7125.9 MD - 7" Casing @ 7125.9' MD | | | | | | | | | |
| 7,150.0 | 85.00 | 269.11 | 6,771.1 | 520.7 | -295.1 | 314.1 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 85.00 | 269.11 | 6,775.5 | 519.9 | -344.9 | 363.9 | 0.00 | 0.00 | 0.00 |
| 7,200.9 | 85.00 | 269.11 | 6,775.6 | 519.9 | -345.8 | 364.7 | 0.00 | 0.00 | 0.00 |
| Start Build 9.00 | | | | | | | | | |
| 7,250.0 | 89.42 | 269.11 | 6,778.0 | 519.1 | -394.8 | 413.7 | 9.00 | 9.00 | 0.00 |
| 7,253.2 | 89.42 | 269.11 | 6,778.0 | 519.1 | -398.0 | 416.9 | 0.00 | 0.00 | 0.00 |
| CODELL | | | | | | | | | |
| 7,256.5 | 90.00 | 269.11 | 6,778.0 | 519.0 | -401.3 | 420.2 | 18.00 | 18.00 | 0.00 |
| 7,300.0 | 90.00 | 269.11 | 6,778.0 | 518.3 | -444.8 | 463.6 | 0.00 | 0.00 | 0.00 |
| 7,350.0 | 90.00 | 269.11 | 6,778.0 | 517.6 | -494.8 | 513.6 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 90.00 | 269.11 | 6,778.0 | 516.8 | -544.8 | 563.5 | 0.00 | 0.00 | 0.00 |
| 7,450.0 | 90.00 | 269.11 | 6,778.0 | 516.0 | -594.8 | 613.4 | 0.00 | 0.00 | 0.00 |
| 7,500.0 | 90.00 | 269.11 | 6,778.0 | 515.2 | -644.8 | 663.4 | 0.00 | 0.00 | 0.00 |
| 7,550.0 | 90.00 | 269.11 | 6,778.0 | 514.5 | -694.8 | 713.3 | 0.00 | 0.00 | 0.00 |
| 7,600.0 | 90.00 | 269.11 | 6,778.0 | 513.7 | -744.8 | 763.2 | 0.00 | 0.00 | 0.00 |
| 7,650.0 | 90.00 | 269.11 | 6,778.0 | 512.9 | -794.8 | 813.2 | 0.00 | 0.00 | 0.00 |
| 7,700.0 | 90.00 | 269.11 | 6,778.0 | 512.2 | -844.7 | 863.1 | 0.00 | 0.00 | 0.00 |
| 7,750.0 | 90.00 | 269.11 | 6,778.0 | 511.4 | -894.7 | 913.0 | 0.00 | 0.00 | 0.00 |
| 7,800.0 | 90.00 | 269.11 | 6,778.0 | 510.6 | -944.7 | 963.0 | 0.00 | 0.00 | 0.00 |
| 7,850.0 | 90.00 | 269.11 | 6,778.0 | 509.8 | -994.7 | 1,012.9 | 0.00 | 0.00 | 0.00 |
| 7,900.0 | 90.00 | 269.11 | 6,778.0 | 509.1 | -1,044.7 | 1,062.8 | 0.00 | 0.00 | 0.00 |
| 7,950.0 | 90.00 | 269.11 | 6,778.0 | 508.3 | -1,094.7 | 1,112.7 | 0.00 | 0.00 | 0.00 |
| 8,000.0 | 90.00 | 269.11 | 6,778.0 | 507.5 | -1,144.7 | 1,162.7 | 0.00 | 0.00 | 0.00 |
| 8,050.0 | 90.00 | 269.11 | 6,778.0 | 506.8 | -1,194.7 | 1,212.6 | 0.00 | 0.00 | 0.00 |
| 8,100.0 | 90.00 | 269.11 | 6,778.0 | 506.0 | -1,244.7 | 1,262.5 | 0.00 | 0.00 | 0.00 |
| 8,150.0 | 90.00 | 269.11 | 6,778.0 | 505.2 | -1,294.7 | 1,312.5 | 0.00 | 0.00 | 0.00 |
| 8,200.0 | 90.00 | 269.11 | 6,778.0 | 504.4 | -1,344.7 | 1,362.4 | 0.00 | 0.00 | 0.00 |
| 8,250.0 | 90.00 | 269.11 | 6,778.0 | 503.7 | -1,394.7 | 1,412.3 | 0.00 | 0.00 | 0.00 |
| 8,300.0 | 90.00 | 269.11 | 6,778.0 | 502.9 | -1,444.7 | 1,462.3 | 0.00 | 0.00 | 0.00 |
| 8,350.0 | 90.00 | 269.11 | 6,778.0 | 502.1 | -1,494.7 | 1,512.2 | 0.00 | 0.00 | 0.00 |
| 8,400.0 | 90.00 | 269.11 | 6,778.0 | 501.3 | -1,544.7 | 1,562.1 | 0.00 | 0.00 | 0.00 |
| 8,450.0 | 90.00 | 269.11 | 6,778.0 | 500.6 | -1,594.7 | 1,612.1 | 0.00 | 0.00 | 0.00 |
| 8,500.0 | 90.00 | 269.11 | 6,778.0 | 499.8 | -1,644.7 | 1,662.0 | 0.00 | 0.00 | 0.00 |
| 8,550.0 | 90.00 | 269.11 | 6,778.0 | 499.0 | -1,694.6 | 1,711.9 | 0.00 | 0.00 | 0.00 |
| 8,600.0 | 90.00 | 269.11 | 6,778.0 | 498.3 | -1,744.6 | 1,761.9 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

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|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 8,650.0 | 90.00 | 269.11 | 6,778.0 | 497.5 | -1,794.6 | 1,811.8 | 0.00 | 0.00 | 0.00 |
| 8,700.0 | 90.00 | 269.11 | 6,778.0 | 496.7 | -1,844.6 | 1,861.7 | 0.00 | 0.00 | 0.00 |
| 8,750.0 | 90.00 | 269.11 | 6,778.0 | 495.9 | -1,894.6 | 1,911.7 | 0.00 | 0.00 | 0.00 |
| 8,800.0 | 90.00 | 269.11 | 6,778.0 | 495.2 | -1,944.6 | 1,961.6 | 0.00 | 0.00 | 0.00 |
| 8,850.0 | 90.00 | 269.11 | 6,778.0 | 494.4 | -1,994.6 | 2,011.5 | 0.00 | 0.00 | 0.00 |
| 8,900.0 | 90.00 | 269.11 | 6,778.0 | 493.6 | -2,044.6 | 2,061.4 | 0.00 | 0.00 | 0.00 |
| 8,950.0 | 90.00 | 269.11 | 6,778.0 | 492.8 | -2,094.6 | 2,111.4 | 0.00 | 0.00 | 0.00 |
| 9,000.0 | 90.00 | 269.11 | 6,778.0 | 492.1 | -2,144.6 | 2,161.3 | 0.00 | 0.00 | 0.00 |
| 9,050.0 | 90.00 | 269.11 | 6,778.0 | 491.3 | -2,194.6 | 2,211.2 | 0.00 | 0.00 | 0.00 |
| 9,100.0 | 90.00 | 269.11 | 6,778.0 | 490.5 | -2,244.6 | 2,261.2 | 0.00 | 0.00 | 0.00 |
| 9,150.0 | 90.00 | 269.11 | 6,778.0 | 489.8 | -2,294.6 | 2,311.1 | 0.00 | 0.00 | 0.00 |
| 9,200.0 | 90.00 | 269.11 | 6,778.0 | 489.0 | -2,344.6 | 2,361.0 | 0.00 | 0.00 | 0.00 |
| 9,250.0 | 90.00 | 269.11 | 6,778.0 | 488.2 | -2,394.6 | 2,411.0 | 0.00 | 0.00 | 0.00 |
| 9,300.0 | 90.00 | 269.11 | 6,778.0 | 487.4 | -2,444.6 | 2,460.9 | 0.00 | 0.00 | 0.00 |
| 9,350.0 | 90.00 | 269.11 | 6,778.0 | 486.7 | -2,494.6 | 2,510.8 | 0.00 | 0.00 | 0.00 |
| 9,400.0 | 90.00 | 269.11 | 6,778.0 | 485.9 | -2,544.5 | 2,560.8 | 0.00 | 0.00 | 0.00 |
| 9,450.0 | 90.00 | 269.11 | 6,778.0 | 485.1 | -2,594.5 | 2,610.7 | 0.00 | 0.00 | 0.00 |
| 9,500.0 | 90.00 | 269.11 | 6,778.0 | 484.4 | -2,644.5 | 2,660.6 | 0.00 | 0.00 | 0.00 |
| 9,550.0 | 90.00 | 269.11 | 6,778.0 | 483.6 | -2,694.5 | 2,710.6 | 0.00 | 0.00 | 0.00 |
| 9,600.0 | 90.00 | 269.11 | 6,778.0 | 482.8 | -2,744.5 | 2,760.5 | 0.00 | 0.00 | 0.00 |
| 9,650.0 | 90.00 | 269.11 | 6,778.0 | 482.0 | -2,794.5 | 2,810.4 | 0.00 | 0.00 | 0.00 |
| 9,700.0 | 90.00 | 269.11 | 6,778.0 | 481.3 | -2,844.5 | 2,860.3 | 0.00 | 0.00 | 0.00 |
| 9,750.0 | 90.00 | 269.11 | 6,778.0 | 480.5 | -2,894.5 | 2,910.3 | 0.00 | 0.00 | 0.00 |
| 9,800.0 | 90.00 | 269.11 | 6,778.0 | 479.7 | -2,944.5 | 2,960.2 | 0.00 | 0.00 | 0.00 |
| 9,850.0 | 90.00 | 269.11 | 6,778.0 | 478.9 | -2,994.5 | 3,010.1 | 0.00 | 0.00 | 0.00 |
| 9,900.0 | 90.00 | 269.11 | 6,778.0 | 478.2 | -3,044.5 | 3,060.1 | 0.00 | 0.00 | 0.00 |
| 9,950.0 | 90.00 | 269.11 | 6,778.0 | 477.4 | -3,094.5 | 3,110.0 | 0.00 | 0.00 | 0.00 |
| 10,000.0 | 90.00 | 269.11 | 6,778.0 | 476.6 | -3,144.5 | 3,159.9 | 0.00 | 0.00 | 0.00 |
| 10,050.0 | 90.00 | 269.11 | 6,778.0 | 475.9 | -3,194.5 | 3,209.9 | 0.00 | 0.00 | 0.00 |
| 10,100.0 | 90.00 | 269.11 | 6,778.0 | 475.1 | -3,244.5 | 3,259.8 | 0.00 | 0.00 | 0.00 |
| 10,150.0 | 90.00 | 269.11 | 6,778.0 | 474.3 | -3,294.5 | 3,309.7 | 0.00 | 0.00 | 0.00 |
| 10,200.0 | 90.00 | 269.11 | 6,778.0 | 473.5 | -3,344.5 | 3,359.7 | 0.00 | 0.00 | 0.00 |
| 10,250.0 | 90.00 | 269.11 | 6,778.0 | 472.8 | -3,394.4 | 3,409.6 | 0.00 | 0.00 | 0.00 |
| 10,300.0 | 90.00 | 269.11 | 6,778.0 | 472.0 | -3,444.4 | 3,459.5 | 0.00 | 0.00 | 0.00 |
| 10,350.0 | 90.00 | 269.11 | 6,778.0 | 471.2 | -3,494.4 | 3,509.5 | 0.00 | 0.00 | 0.00 |
| 10,400.0 | 90.00 | 269.11 | 6,778.0 | 470.4 | -3,544.4 | 3,559.4 | 0.00 | 0.00 | 0.00 |
| 10,450.0 | 90.00 | 269.11 | 6,778.0 | 469.7 | -3,594.4 | 3,609.3 | 0.00 | 0.00 | 0.00 |
| 10,500.0 | 90.00 | 269.11 | 6,778.0 | 468.9 | -3,644.4 | 3,659.3 | 0.00 | 0.00 | 0.00 |
| 10,550.0 | 90.00 | 269.11 | 6,778.0 | 468.1 | -3,694.4 | 3,709.2 | 0.00 | 0.00 | 0.00 |
| 10,600.0 | 90.00 | 269.11 | 6,778.0 | 467.4 | -3,744.4 | 3,759.1 | 0.00 | 0.00 | 0.00 |
| 10,650.0 | 90.00 | 269.11 | 6,778.0 | 466.6 | -3,794.4 | 3,809.0 | 0.00 | 0.00 | 0.00 |
| 10,700.0 | 90.00 | 269.11 | 6,778.0 | 465.8 | -3,844.4 | 3,859.0 | 0.00 | 0.00 | 0.00 |
| 10,750.0 | 90.00 | 269.11 | 6,778.0 | 465.0 | -3,894.4 | 3,908.9 | 0.00 | 0.00 | 0.00 |
| 10,800.0 | 90.00 | 269.11 | 6,778.0 | 464.3 | -3,944.4 | 3,958.8 | 0.00 | 0.00 | 0.00 |
| 10,850.0 | 90.00 | 269.11 | 6,778.0 | 463.5 | -3,994.4 | 4,008.8 | 0.00 | 0.00 | 0.00 |
| 10,900.0 | 90.00 | 269.11 | 6,778.0 | 462.7 | -4,044.4 | 4,058.7 | 0.00 | 0.00 | 0.00 |
| 10,950.0 | 90.00 | 269.11 | 6,778.0 | 462.0 | -4,094.4 | 4,108.6 | 0.00 | 0.00 | 0.00 |
| 11,000.0 | 90.00 | 269.11 | 6,778.0 | 461.2 | -4,144.4 | 4,158.6 | 0.00 | 0.00 | 0.00 |
| 11,050.0 | 90.00 | 269.11 | 6,778.0 | 460.4 | -4,194.4 | 4,208.5 | 0.00 | 0.00 | 0.00 |
| 11,100.0 | 90.00 | 269.11 | 6,778.0 | 459.6 | -4,244.3 | 4,258.4 | 0.00 | 0.00 | 0.00 |
| 11,150.0 | 90.00 | 269.11 | 6,778.0 | 458.9 | -4,294.3 | 4,308.4 | 0.00 | 0.00 | 0.00 |
| 11,200.0 | 90.00 | 269.11 | 6,778.0 | 458.1 | -4,344.3 | 4,358.3 | 0.00 | 0.00 | 0.00 |
| 11,250.0 | 90.00 | 269.11 | 6,778.0 | 457.3 | -4,394.3 | 4,408.2 | 0.00 | 0.00 | 0.00 |
| 11,300.0 | 90.00 | 269.11 | 6,778.0 | 456.5 | -4,444.3 | 4,458.2 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 11,350.0 | 90.00 | 269.11 | 6,778.0 | 455.8 | -4,494.3 | 4,508.1 | 0.00 | 0.00 | 0.00 |
| 11,400.0 | 90.00 | 269.11 | 6,778.0 | 455.0 | -4,544.3 | 4,558.0 | 0.00 | 0.00 | 0.00 |
| 11,450.0 | 90.00 | 269.11 | 6,778.0 | 454.2 | -4,594.3 | 4,608.0 | 0.00 | 0.00 | 0.00 |
| 11,500.0 | 90.00 | 269.11 | 6,778.0 | 453.5 | -4,644.3 | 4,657.9 | 0.00 | 0.00 | 0.00 |
| 11,550.0 | 90.00 | 269.11 | 6,778.0 | 452.7 | -4,694.3 | 4,707.8 | 0.00 | 0.00 | 0.00 |
| 11,600.0 | 90.00 | 269.11 | 6,778.0 | 451.9 | -4,744.3 | 4,757.7 | 0.00 | 0.00 | 0.00 |
| 11,650.0 | 90.00 | 269.11 | 6,778.0 | 451.1 | -4,794.3 | 4,807.7 | 0.00 | 0.00 | 0.00 |
| 11,700.0 | 90.00 | 269.11 | 6,778.0 | 450.4 | -4,844.3 | 4,857.6 | 0.00 | 0.00 | 0.00 |
| 11,750.0 | 90.00 | 269.11 | 6,778.0 | 449.6 | -4,894.3 | 4,907.5 | 0.00 | 0.00 | 0.00 |
| 11,800.0 | 90.00 | 269.11 | 6,778.0 | 448.8 | -4,944.3 | 4,957.5 | 0.00 | 0.00 | 0.00 |
| 11,850.0 | 90.00 | 269.11 | 6,778.0 | 448.0 | -4,994.3 | 5,007.4 | 0.00 | 0.00 | 0.00 |
| 11,900.0 | 90.00 | 269.11 | 6,778.0 | 447.3 | -5,044.3 | 5,057.3 | 0.00 | 0.00 | 0.00 |
| 11,950.0 | 90.00 | 269.11 | 6,778.0 | 446.5 | -5,094.2 | 5,107.3 | 0.00 | 0.00 | 0.00 |
| 12,000.0 | 90.00 | 269.11 | 6,778.0 | 445.7 | -5,144.2 | 5,157.2 | 0.00 | 0.00 | 0.00 |
| 12,050.0 | 90.00 | 269.11 | 6,778.0 | 445.0 | -5,194.2 | 5,207.1 | 0.00 | 0.00 | 0.00 |
| 12,100.0 | 90.00 | 269.11 | 6,778.0 | 444.2 | -5,244.2 | 5,257.1 | 0.00 | 0.00 | 0.00 |
| 12,150.0 | 90.00 | 269.11 | 6,778.0 | 443.4 | -5,294.2 | 5,307.0 | 0.00 | 0.00 | 0.00 |
| 12,200.0 | 90.00 | 269.11 | 6,778.0 | 442.6 | -5,344.2 | 5,356.9 | 0.00 | 0.00 | 0.00 |
| 12,250.0 | 90.00 | 269.11 | 6,778.0 | 441.9 | -5,394.2 | 5,406.9 | 0.00 | 0.00 | 0.00 |
| 12,300.0 | 90.00 | 269.11 | 6,778.0 | 441.1 | -5,444.2 | 5,456.8 | 0.00 | 0.00 | 0.00 |
| 12,350.0 | 90.00 | 269.11 | 6,778.0 | 440.3 | -5,494.2 | 5,506.7 | 0.00 | 0.00 | 0.00 |
| 12,400.0 | 90.00 | 269.11 | 6,778.0 | 439.6 | -5,544.2 | 5,556.6 | 0.00 | 0.00 | 0.00 |
| 12,450.0 | 90.00 | 269.11 | 6,778.0 | 438.8 | -5,594.2 | 5,606.6 | 0.00 | 0.00 | 0.00 |
| 12,500.0 | 90.00 | 269.11 | 6,778.0 | 438.0 | -5,644.2 | 5,656.5 | 0.00 | 0.00 | 0.00 |
| 12,550.0 | 90.00 | 269.11 | 6,778.0 | 437.2 | -5,694.2 | 5,706.4 | 0.00 | 0.00 | 0.00 |
| 12,600.0 | 90.00 | 269.11 | 6,778.0 | 436.5 | -5,744.2 | 5,756.4 | 0.00 | 0.00 | 0.00 |
| 12,650.0 | 90.00 | 269.11 | 6,778.0 | 435.7 | -5,794.2 | 5,806.3 | 0.00 | 0.00 | 0.00 |
| 12,700.0 | 90.00 | 269.11 | 6,778.0 | 434.9 | -5,844.2 | 5,856.2 | 0.00 | 0.00 | 0.00 |
| 12,750.0 | 90.00 | 269.11 | 6,778.0 | 434.1 | -5,894.2 | 5,906.2 | 0.00 | 0.00 | 0.00 |
| 12,800.0 | 90.00 | 269.11 | 6,778.0 | 433.4 | -5,944.1 | 5,956.1 | 0.00 | 0.00 | 0.00 |
| 12,850.0 | 90.00 | 269.11 | 6,778.0 | 432.6 | -5,994.1 | 6,006.0 | 0.00 | 0.00 | 0.00 |
| 12,900.0 | 90.00 | 269.11 | 6,778.0 | 431.8 | -6,044.1 | 6,056.0 | 0.00 | 0.00 | 0.00 |
| 12,950.0 | 90.00 | 269.11 | 6,778.0 | 431.1 | -6,094.1 | 6,105.9 | 0.00 | 0.00 | 0.00 |
| 13,000.0 | 90.00 | 269.11 | 6,778.0 | 430.3 | -6,144.1 | 6,155.8 | 0.00 | 0.00 | 0.00 |
| 13,050.0 | 90.00 | 269.11 | 6,778.0 | 429.5 | -6,194.1 | 6,205.8 | 0.00 | 0.00 | 0.00 |
| 13,100.0 | 90.00 | 269.11 | 6,778.0 | 428.7 | -6,244.1 | 6,255.7 | 0.00 | 0.00 | 0.00 |
| 13,150.0 | 90.00 | 269.11 | 6,778.0 | 428.0 | -6,294.1 | 6,305.6 | 0.00 | 0.00 | 0.00 |
| 13,200.0 | 90.00 | 269.11 | 6,778.0 | 427.2 | -6,344.1 | 6,355.6 | 0.00 | 0.00 | 0.00 |
| 13,250.0 | 90.00 | 269.11 | 6,778.0 | 426.4 | -6,394.1 | 6,405.5 | 0.00 | 0.00 | 0.00 |
| 13,300.0 | 90.00 | 269.11 | 6,778.0 | 425.6 | -6,444.1 | 6,455.4 | 0.00 | 0.00 | 0.00 |
| 13,350.0 | 90.00 | 269.11 | 6,778.0 | 424.9 | -6,494.1 | 6,505.3 | 0.00 | 0.00 | 0.00 |
| 13,400.0 | 90.00 | 269.11 | 6,778.0 | 424.1 | -6,544.1 | 6,555.3 | 0.00 | 0.00 | 0.00 |
| 13,450.0 | 90.00 | 269.11 | 6,778.0 | 423.3 | -6,594.1 | 6,605.2 | 0.00 | 0.00 | 0.00 |
| 13,500.0 | 90.00 | 269.11 | 6,778.0 | 422.6 | -6,644.1 | 6,655.1 | 0.00 | 0.00 | 0.00 |
| 13,550.0 | 90.00 | 269.11 | 6,778.0 | 421.8 | -6,694.1 | 6,705.1 | 0.00 | 0.00 | 0.00 |
| 13,600.0 | 90.00 | 269.11 | 6,778.0 | 421.0 | -6,744.1 | 6,755.0 | 0.00 | 0.00 | 0.00 |
| 13,650.0 | 90.00 | 269.11 | 6,778.0 | 420.2 | -6,794.0 | 6,804.9 | 0.00 | 0.00 | 0.00 |
| 13,700.0 | 90.00 | 269.11 | 6,778.0 | 419.5 | -6,844.0 | 6,854.9 | 0.00 | 0.00 | 0.00 |
| 13,750.0 | 90.00 | 269.11 | 6,778.0 | 418.7 | -6,894.0 | 6,904.8 | 0.00 | 0.00 | 0.00 |
| 13,800.0 | 90.00 | 269.11 | 6,778.0 | 417.9 | -6,944.0 | 6,954.7 | 0.00 | 0.00 | 0.00 |
| 13,850.0 | 90.00 | 269.11 | 6,778.0 | 417.2 | -6,994.0 | 7,004.7 | 0.00 | 0.00 | 0.00 |
| 13,900.0 | 90.00 | 269.11 | 6,778.0 | 416.4 | -7,044.0 | 7,054.6 | 0.00 | 0.00 | 0.00 |
| 13,950.0 | 90.00 | 269.11 | 6,778.0 | 415.6 | -7,094.0 | 7,104.5 | 0.00 | 0.00 | 0.00 |
| 14,000.0 | 90.00 | 269.11 | 6,778.0 | 414.8 | -7,144.0 | 7,154.5 | 0.00 | 0.00 | 0.00 |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) | |
| 14,050.0 | 90.00 | 269.11 | 6,778.0 | 414.1 | -7,194.0 | 7,204.4 | 0.00 | 0.00 | 0.00 | |
| 14,100.0 | 90.00 | 269.11 | 6,778.0 | 413.3 | -7,244.0 | 7,254.3 | 0.00 | 0.00 | 0.00 | |
| 14,150.0 | 90.00 | 269.11 | 6,778.0 | 412.5 | -7,294.0 | 7,304.2 | 0.00 | 0.00 | 0.00 | |
| 14,200.0 | 90.00 | 269.11 | 6,778.0 | 411.7 | -7,344.0 | 7,354.2 | 0.00 | 0.00 | 0.00 | |
| 14,250.0 | 90.00 | 269.11 | 6,778.0 | 411.0 | -7,394.0 | 7,404.1 | 0.00 | 0.00 | 0.00 | |
| 14,300.0 | 90.00 | 269.11 | 6,778.0 | 410.2 | -7,444.0 | 7,454.0 | 0.00 | 0.00 | 0.00 | |
| 14,350.0 | 90.00 | 269.11 | 6,778.0 | 409.4 | -7,494.0 | 7,504.0 | 0.00 | 0.00 | 0.00 | |
| 14,400.0 | 90.00 | 269.11 | 6,778.0 | 408.7 | -7,544.0 | 7,553.9 | 0.00 | 0.00 | 0.00 | |
| 14,450.0 | 90.00 | 269.11 | 6,778.0 | 407.9 | -7,594.0 | 7,603.8 | 0.00 | 0.00 | 0.00 | |
| 14,500.0 | 90.00 | 269.11 | 6,778.0 | 407.1 | -7,643.9 | 7,653.8 | 0.00 | 0.00 | 0.00 | |
| 14,550.0 | 90.00 | 269.11 | 6,778.0 | 406.3 | -7,693.9 | 7,703.7 | 0.00 | 0.00 | 0.00 | |
| 14,600.0 | 90.00 | 269.11 | 6,778.0 | 405.6 | -7,743.9 | 7,753.6 | 0.00 | 0.00 | 0.00 | |
| 14,650.0 | 90.00 | 269.11 | 6,778.0 | 404.8 | -7,793.9 | 7,803.6 | 0.00 | 0.00 | 0.00 | |
| 14,700.0 | 90.00 | 269.11 | 6,778.0 | 404.0 | -7,843.9 | 7,853.5 | 0.00 | 0.00 | 0.00 | |
| 14,750.0 | 90.00 | 269.11 | 6,778.0 | 403.2 | -7,893.9 | 7,903.4 | 0.00 | 0.00 | 0.00 | |
| 14,800.0 | 90.00 | 269.11 | 6,778.0 | 402.5 | -7,943.9 | 7,953.4 | 0.00 | 0.00 | 0.00 | |
| 14,850.0 | 90.00 | 269.11 | 6,778.0 | 401.7 | -7,993.9 | 8,003.3 | 0.00 | 0.00 | 0.00 | |
| 14,900.0 | 90.00 | 269.11 | 6,778.0 | 400.9 | -8,043.9 | 8,053.2 | 0.00 | 0.00 | 0.00 | |
| 14,950.0 | 90.00 | 269.11 | 6,778.0 | 400.2 | -8,093.9 | 8,103.2 | 0.00 | 0.00 | 0.00 | |
| 15,000.0 | 90.00 | 269.11 | 6,778.0 | 399.4 | -8,143.9 | 8,153.1 | 0.00 | 0.00 | 0.00 | |
| 15,050.0 | 90.00 | 269.11 | 6,778.0 | 398.6 | -8,193.9 | 8,203.0 | 0.00 | 0.00 | 0.00 | |
| 15,100.0 | 90.00 | 269.11 | 6,778.0 | 397.8 | -8,243.9 | 8,252.9 | 0.00 | 0.00 | 0.00 | |
| 15,150.0 | 90.00 | 269.11 | 6,778.0 | 397.1 | -8,293.9 | 8,302.9 | 0.00 | 0.00 | 0.00 | |
| 15,200.0 | 90.00 | 269.11 | 6,778.0 | 396.3 | -8,343.9 | 8,352.8 | 0.00 | 0.00 | 0.00 | |
| 15,250.0 | 90.00 | 269.11 | 6,778.0 | 395.5 | -8,393.9 | 8,402.7 | 0.00 | 0.00 | 0.00 | |
| 15,300.0 | 90.00 | 269.11 | 6,778.0 | 394.8 | -8,443.9 | 8,452.7 | 0.00 | 0.00 | 0.00 | |
| 15,350.0 | 90.00 | 269.11 | 6,778.0 | 394.0 | -8,493.8 | 8,502.6 | 0.00 | 0.00 | 0.00 | |
| 15,400.0 | 90.00 | 269.11 | 6,778.0 | 393.2 | -8,543.8 | 8,552.5 | 0.00 | 0.00 | 0.00 | |
| 15,450.0 | 90.00 | 269.11 | 6,778.0 | 392.4 | -8,593.8 | 8,602.5 | 0.00 | 0.00 | 0.00 | |
| 15,500.0 | 90.00 | 269.11 | 6,778.0 | 391.7 | -8,643.8 | 8,652.4 | 0.00 | 0.00 | 0.00 | |
| 15,550.0 | 90.00 | 269.11 | 6,778.0 | 390.9 | -8,693.8 | 8,702.3 | 0.00 | 0.00 | 0.00 | |
| 15,600.0 | 90.00 | 269.11 | 6,778.0 | 390.1 | -8,743.8 | 8,752.3 | 0.00 | 0.00 | 0.00 | |
| 15,650.0 | 90.00 | 269.11 | 6,778.0 | 389.3 | -8,793.8 | 8,802.2 | 0.00 | 0.00 | 0.00 | |
| 15,700.0 | 90.00 | 269.11 | 6,778.0 | 388.6 | -8,843.8 | 8,852.1 | 0.00 | 0.00 | 0.00 | |
| 15,750.0 | 90.00 | 269.11 | 6,778.0 | 387.8 | -8,893.8 | 8,902.1 | 0.00 | 0.00 | 0.00 | |
| 15,800.0 | 90.00 | 269.11 | 6,778.0 | 387.0 | -8,943.8 | 8,952.0 | 0.00 | 0.00 | 0.00 | |
| 15,850.0 | 90.00 | 269.11 | 6,778.0 | 386.3 | -8,993.8 | 9,001.9 | 0.00 | 0.00 | 0.00 | |
| 15,900.0 | 90.00 | 269.11 | 6,778.0 | 385.5 | -9,043.8 | 9,051.9 | 0.00 | 0.00 | 0.00 | |
| 15,950.0 | 90.00 | 269.11 | 6,778.0 | 384.7 | -9,093.8 | 9,101.8 | 0.00 | 0.00 | 0.00 | |
| 16,000.0 | 90.00 | 269.11 | 6,778.0 | 383.9 | -9,143.8 | 9,151.7 | 0.00 | 0.00 | 0.00 | |
| 16,050.0 | 90.00 | 269.11 | 6,778.0 | 383.2 | -9,193.8 | 9,201.6 | 0.00 | 0.00 | 0.00 | |
| 16,100.0 | 90.00 | 269.11 | 6,778.0 | 382.4 | -9,243.8 | 9,251.6 | 0.00 | 0.00 | 0.00 | |
| 16,150.0 | 90.00 | 269.11 | 6,778.0 | 381.6 | -9,293.8 | 9,301.5 | 0.00 | 0.00 | 0.00 | |
| 16,200.0 | 90.00 | 269.11 | 6,778.0 | 380.8 | -9,343.7 | 9,351.4 | 0.00 | 0.00 | 0.00 | |
| 16,250.0 | 90.00 | 269.11 | 6,778.0 | 380.1 | -9,393.7 | 9,401.4 | 0.00 | 0.00 | 0.00 | |
| 16,300.0 | 90.00 | 269.11 | 6,778.0 | 379.3 | -9,443.7 | 9,451.3 | 0.00 | 0.00 | 0.00 | |
| 16,350.0 | 90.00 | 269.11 | 6,778.0 | 378.5 | -9,493.7 | 9,501.2 | 0.00 | 0.00 | 0.00 | |
| 16,400.0 | 90.00 | 269.11 | 6,778.0 | 377.8 | -9,543.7 | 9,551.2 | 0.00 | 0.00 | 0.00 | |
| 16,450.0 | 90.00 | 269.11 | 6,778.0 | 377.0 | -9,593.7 | 9,601.1 | 0.00 | 0.00 | 0.00 | |
| 16,500.0 | 90.00 | 269.11 | 6,778.0 | 376.2 | -9,643.7 | 9,651.0 | 0.00 | 0.00 | 0.00 | |
| 16,550.0 | 90.00 | 269.11 | 6,778.0 | 375.4 | -9,693.7 | 9,701.0 | 0.00 | 0.00 | 0.00 | |
| 16,600.0 | 90.00 | 269.11 | 6,778.0 | 374.7 | -9,743.7 | 9,750.9 | 0.00 | 0.00 | 0.00 | |
| 16,650.0 | 90.00 | 269.11 | 6,778.0 | 373.9 | -9,793.7 | 9,800.8 | 0.00 | 0.00 | 0.00 | |
| 16,700.0 | 90.00 | 269.11 | 6,778.0 | 373.1 | -9,843.7 | 9,850.8 | 0.00 | 0.00 | 0.00 | |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Planned Survey | | | | | | | | | |
|---|-----------------|-------------|---------------------|------------|------------|-----------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 16,750.0 | 90.00 | 269.11 | 6,778.0 | 372.4 | -9,893.7 | 9,900.7 | 0.00 | 0.00 | 0.00 |
| 16,800.0 | 90.00 | 269.11 | 6,778.0 | 371.6 | -9,943.7 | 9,950.6 | 0.00 | 0.00 | 0.00 |
| 16,850.0 | 90.00 | 269.11 | 6,778.0 | 370.8 | -9,993.7 | 10,000.5 | 0.00 | 0.00 | 0.00 |
| 16,875.2 | 90.00 | 269.11 | 6,778.0 | 370.4 | -10,018.8 | 10,025.7 | 0.00 | 0.00 | 0.00 |
| TD at 16875.2 - Wells Ranch State A36-686 BHL 260°FNL, 50'FWL | | | | | | | | | |

| Design Targets | | | | | | | | | |
|---------------------------|---------------|--------------|----------|------------|------------|-----------------|----------------|-----------|-------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| Wells Ranch State A36-686 | 0.00 | 0.00 | 6,778.0 | 370.4 | -10,018.9 | 1,408,109.46 | 3,276,180.86 | 40.449420 | -104.507620 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

| Casing Points | | | | | | Casing Diameter (") | Hole Diameter (") |
|---------------------|---------------------|------------------------|--|--|--|---------------------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | | | | | |
| 7,125.9 | 6,769.0 | 7" Casing @ 7125.9' MD | | | | 7 | 8-3/4 |

| Formations | | | | | | |
|---------------------|---------------------|----------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) | |
| 2,378.2 | 2,371.0 | PIERRE | | 0.00 | | |
| 3,533.5 | 3,512.0 | PARKMAN | | 0.00 | | |
| 4,312.1 | 4,281.0 | SUSSEX | | 0.00 | | |
| 4,890.3 | 4,852.0 | SHANNON | | 0.00 | | |
| 5,865.6 | 5,819.0 | TEEPEE BUTTES | | 0.00 | | |
| 6,560.6 | 6,492.0 | SHARON SPRINGS | | 0.00 | | |
| 6,592.6 | 6,518.0 | NIO A CHALK | | 0.00 | | |
| 6,623.2 | 6,542.0 | NIO A MARL | | 0.00 | | |
| 6,719.4 | 6,611.0 | NIO B CHALK | | 0.00 | | |
| 6,771.6 | 6,644.0 | NIO B MARL | | 0.00 | | |
| 6,855.9 | 6,690.0 | NIO C CHALK | | 0.00 | | |
| 6,947.6 | 6,729.0 | NIO C MARL | | 0.00 | | |
| 7,023.6 | 6,752.0 | FT. HAYES | | 0.00 | | |
| 7,253.2 | 6,778.0 | CODELL | | 0.00 | | |

Noble Energy Inc

Planning Report

| | | | |
|------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Database: | EDM01P | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Company: | Northern Region Drilling - Working | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Project: | Wattenberg Field | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site: | A (06N-64W) | North Reference: | Grid |
| Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Original Drilling | | |
| Design: | APD - Rev 0 | | |

| Plan Annotations | | | | |
|---------------------------|---------------------------|-------------------|---------------|------------------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
| | | +N/-S (ft) | +E/-W (ft) | |
| 1,500.0 | 1,500.0 | 0.0 | 0.0 | KOP - Start Build 2.00 |
| 5,410.0 | 5,365.2 | 499.3 | 292.1 | Start Drop -2.00 |
| 6,181.5 | 6,134.9 | 530.0 | 310.0 | KOP #2 - Start Build 9.00 |
| 7,125.9 | 6,769.0 | 521.0 | -271.1 | Start 75.0 hold at 7125.9 MD |
| 7,200.9 | 6,775.6 | 519.9 | -345.8 | Start Build 9.00 |
| 16,875.2 | 6,778.0 | 370.4 | -10,018.8 | TD at 16875.2 |

Northern Region Drilling - Working

Wattenberg Field

A (06N-64W)

Wells Ranch State A36-686

Original Drilling

APD - Rev 0

Anticollision Summary Report

23 January, 2015

Noble Energy Inc
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
| Project: | Wattenberg Field | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Reference Site: | A (06N-64W) | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM01P |
| 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: | MD Interval 100.0ft | Error Model: | ISCWSA |
| Depth Range: | Unlimited | Scan Method: | Closest Approach 3D |
| Results Limited by: | Maximum center-center distance of 10,000.0 ft | Error Surface: | Elliptical Conic |
| Warning Levels Evaluated at: | 2.00 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|----------------|---------------------------------|------------------|--------------------|
| Survey Tool Program | Date | 1/23/2015 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.0 | 16,875.2 | APD - Rev 0 (Original Drilling) | MWD | MWD - Standard |

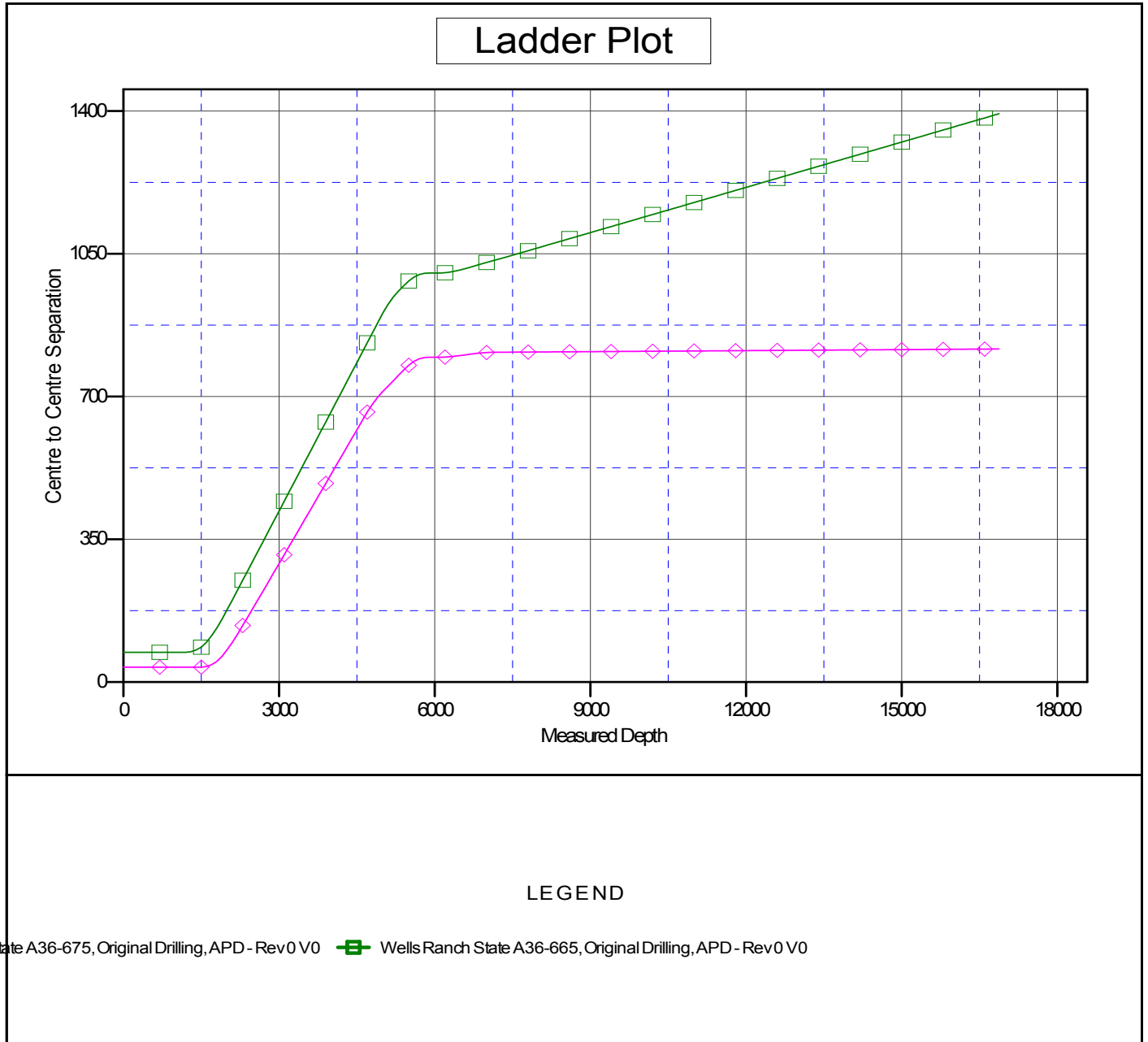
| Summary | | | | | | |
|--|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|-------------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| Offset Well - Wellbore - Design | | | | | | |
| A (06N-64W) | | | | | | |
| Wells Ranch State A36-665 - Original Drilling - APD - Re | 1,200.0 | 1,198.0 | 72.9 | 67.8 | 14.265 | CC, ES |
| Wells Ranch State A36-665 - Original Drilling - APD - Re | 16,875.2 | 16,678.9 | 1,393.4 | 828.8 | 2.468 | SF |
| Wells Ranch State A36-675 - Original Drilling - APD - Re | 1,500.0 | 1,499.0 | 36.4 | 30.0 | 5.637 | CC, ES |
| Wells Ranch State A36-675 - Original Drilling - APD - Re | 16,875.2 | 16,709.2 | 816.7 | 254.8 | 1.453 | Level 2, SF |

Noble Energy Inc
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------------|
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| Project: | Wattenberg Field | TVD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Reference Site: | A (06N-64W) | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM01P |
| Reference Design: | APD - Rev 0 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4680.0ft (H&P 343 RKB - 24'
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch State A36-686
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°



Noble Energy Inc
Anticollision Summary Report

| | | | |
|---------------------------|------------------------------------|-------------------------------------|-------------------------------------|
| Company: | Northern Region Drilling - Working | Local Co-ordinate Reference: | Well Wells Ranch State A36-686 |
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| Reference Site: | A (06N-64W) | MD Reference: | WELL @ 4680.0ft (H&P 343 RKB - 24') |
| Site Error: | 0.0 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State A36-686 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.0 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Original Drilling | Database: | EDM01P |
| Reference Design: | APD - Rev 0 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to WELL @ 4680.0ft (H&P 343 RKB - 24'
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000

Coordinates are relative to: Wells Ranch State A36-686
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.66°

