

Project: Wells Ranch
 Site: A Section 20
 Well: Rampart A32-751
 Wellbore: Rampart A32-751
 Design: APD-Rev 0

Northern Region - DJ Basin

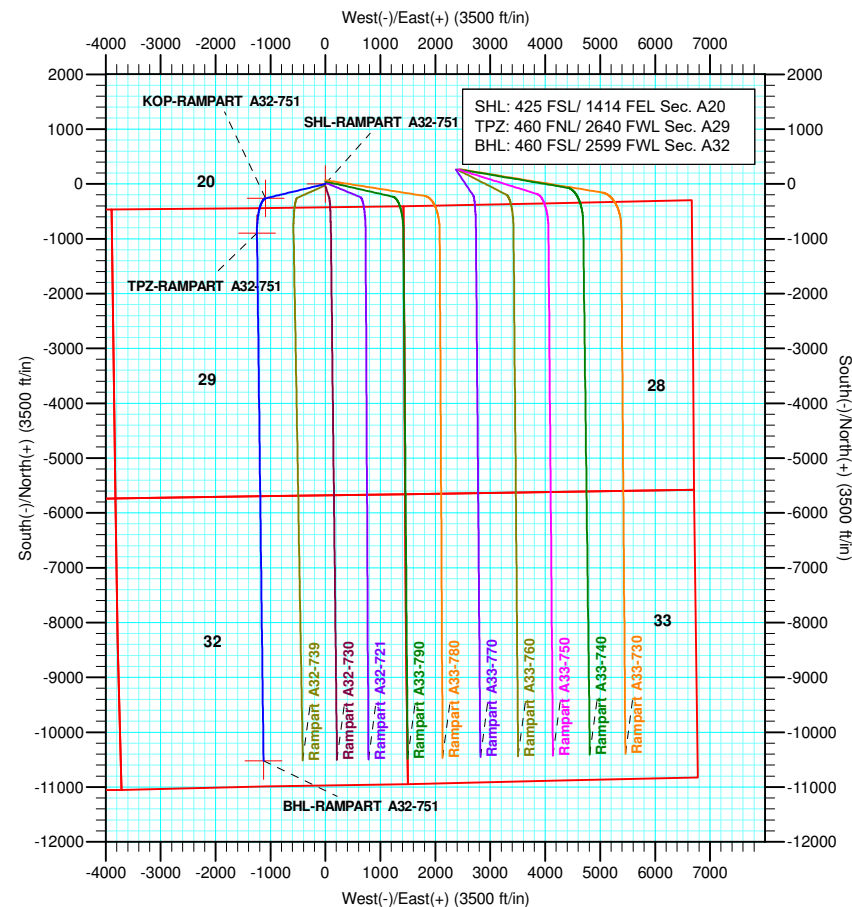
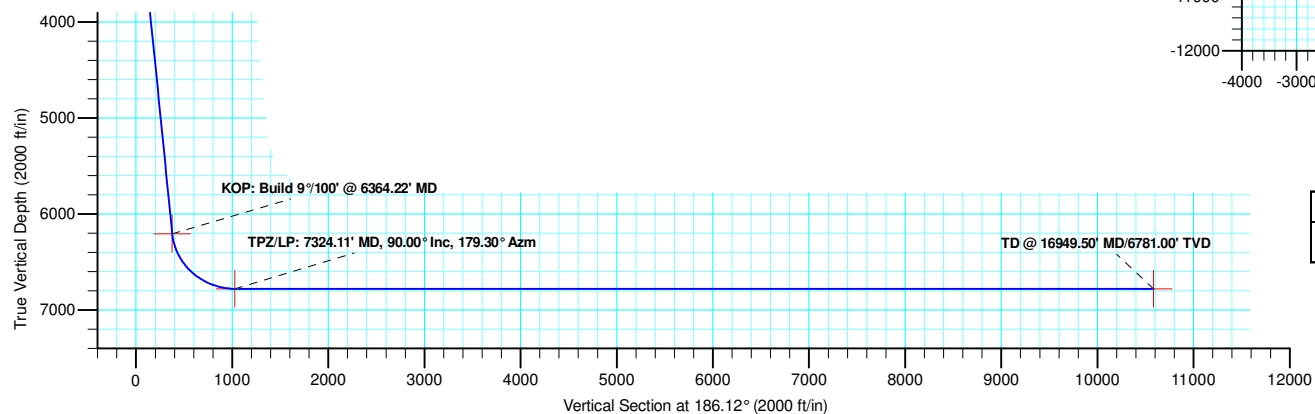
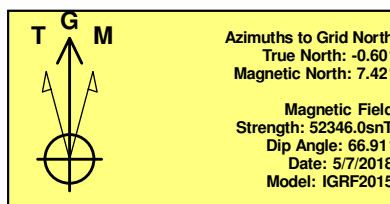
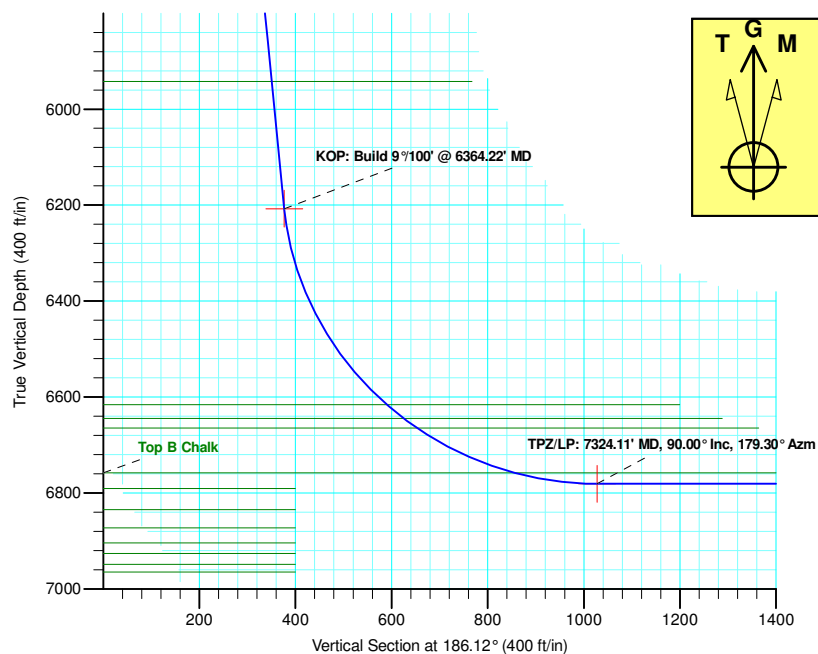
Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: Colorado Northern Zone
 System Datum: Mean Sea Level

SECTION DETAILS

| Sec | MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect |
|-----|----------|-------|--------|---------|-----------|----------|------|--------|----------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2 | 2000.00 | 0.00 | 0.00 | 2000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3 | 2823.12 | 16.46 | 256.46 | 2811.84 | -27.50 | -114.17 | 2.00 | 256.46 | 39.52 |
| 4 | 6364.22 | 16.46 | 256.46 | 6207.78 | -262.46 | -1089.77 | 0.00 | 0.00 | 377.18 |
| 5 | 7324.11 | 90.00 | 179.30 | 6781.00 | -899.80 | -1247.11 | 9.00 | -77.67 | 1027.67 |
| 6 | 16949.50 | 90.00 | 179.30 | 6781.00 | -10524.46 | -1128.80 | 0.00 | 0.00 | 10584.82 |

WELL DETAILS: Rampart A32-751

| +N/-S | +E/-W | Northing | Ground Level: Easting | 4706.00 Latitude | Longitude | Slot |
|-------|-------|------------|--------------------------|---------------------|--------------|------|
| 0.00 | 0.00 | 1413740.23 | 3258845.94 | 40.4653913 | -104.5696913 | |



Plan: APD-Rev 0 (Rampart A32-751/Rampart A32-751)

Created By: Keith Noack Date: 7:31, November 01 2018

Northern Region - DJ Basin

Wells Ranch

A Section 20

Rampart A32-751

Rampart A32-751

Plan: APD-Rev 0

Standard Planning Report

01 November, 2018

Noble Energy, Inc.

Planning Report

| | | | |
|------------------|----------------------------|-------------------------------------|----------------------|
| Database: | EDMP | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Company: | Northern Region - DJ Basin | TVD Reference: | KB @ 4736.00ft |
| Project: | Wells Ranch | MD Reference: | KB @ 4736.00ft |
| Site: | A Section 20 | North Reference: | Grid |
| Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Rampart A32-751 | | |
| Design: | APD-Rev 0 | | |

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

| | | | | | |
|-----------------------|--------------|--------------|-------------------|-------------------|--------------|
| Site | A Section 20 | | | | |
| Site Position: | | Northing: | 1,414,202.83 usft | Latitude: | 40.4665920 |
| From: | Lat/Long | Easting: | 3,261,231.91 usft | Longitude: | -104.5610990 |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13.200 in | Grid Convergence: | 0.61 ° |

| Well | Rampart A32-751 | | | | | |
|----------------------|-----------------|--------------|---------------------|-------------------|---------------|--------------|
| Well Position | +N/-S | -462.60 ft | Northing: | 1,413,740.23 usft | Latitude: | 40.4653913 |
| | +E/-W | -2,385.98 ft | Easting: | 3,258,845.94 usft | Longitude: | -104.5696913 |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | | Ground Level: | 4,706.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Rampart A32-751 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 5/7/2018 | 8.02 | 66.91 | 52,345.98559608 |

| | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| Design | APD-Rev 0 | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PLAN | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.00 | 0.00 | 0.00 | 186.12 |

| Plan Sections | | | | | | | | | | |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|----------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | TFO (°) | Target |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2,823.12 | 16.46 | 256.46 | 2,811.84 | -27.50 | -114.17 | 2.00 | 2.00 | 0.00 | 256.46 | |
| 6,364.22 | 16.46 | 256.46 | 6,207.78 | -262.46 | -1,089.77 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 7,324.11 | 90.00 | 179.30 | 6,781.00 | -899.80 | -1,247.11 | 9.00 | 7.66 | -8.04 | -77.67 | TPZ-RAMPART A3 |
| 16,949.50 | 90.00 | 179.30 | 6,781.00 | -10,524.46 | -1,128.80 | 0.00 | 0.00 | 0.00 | 0.00 | BHL-RAMPART A3 |

Noble Energy, Inc.

Planning Report

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|------------------|----------------------------|-------------------------------------|----------------------|
| Database: | EDMP | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Company: | Northern Region - DJ Basin | TVD Reference: | KB @ 4736.00ft |
| Project: | Wells Ranch | MD Reference: | KB @ 4736.00ft |
| Site: | A Section 20 | North Reference: | Grid |
| Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Rampart A32-751 | | |
| 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 (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 100.00 | 0.00 | 0.00 | 100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 200.00 | 0.00 | 0.00 | 200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 300.00 | 0.00 | 0.00 | 300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 400.00 | 0.00 | 0.00 | 400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 453.00 | 0.00 | 0.00 | 453.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Pierre | | | | | | | | | |
| 475.00 | 0.00 | 0.00 | 475.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Upper Pierre Aquifer Top | | | | | | | | | |
| 500.00 | 0.00 | 0.00 | 500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 600.00 | 0.00 | 0.00 | 600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 700.00 | 0.00 | 0.00 | 700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 800.00 | 0.00 | 0.00 | 800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 900.00 | 0.00 | 0.00 | 900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 0.00 | 0.00 | 1,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,200.00 | 0.00 | 0.00 | 1,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,300.00 | 0.00 | 0.00 | 1,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,400.00 | 0.00 | 0.00 | 1,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,500.00 | 0.00 | 0.00 | 1,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,512.00 | 0.00 | 0.00 | 1,512.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Upper Pierre Aquifer Base | | | | | | | | | |
| 1,600.00 | 0.00 | 0.00 | 1,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,700.00 | 0.00 | 0.00 | 1,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,800.00 | 0.00 | 0.00 | 1,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,900.00 | 0.00 | 0.00 | 1,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,000.00 | 0.00 | 0.00 | 2,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Build: 2°/100' | | | | | | | | | |
| 2,100.00 | 2.00 | 256.46 | 2,099.98 | -0.41 | -1.70 | 0.59 | 2.00 | 2.00 | 0.00 |
| 2,200.00 | 4.00 | 256.46 | 2,199.84 | -1.63 | -6.78 | 2.35 | 2.00 | 2.00 | 0.00 |
| 2,300.00 | 6.00 | 256.46 | 2,299.45 | -3.67 | -15.26 | 5.28 | 2.00 | 2.00 | 0.00 |
| 2,400.00 | 8.00 | 256.46 | 2,398.70 | -6.53 | -27.10 | 9.38 | 2.00 | 2.00 | 0.00 |
| 2,500.00 | 10.00 | 256.46 | 2,497.47 | -10.19 | -42.31 | 14.64 | 2.00 | 2.00 | 0.00 |
| 2,600.00 | 12.00 | 256.46 | 2,595.62 | -14.66 | -60.86 | 21.07 | 2.00 | 2.00 | 0.00 |
| 2,700.00 | 14.00 | 256.46 | 2,693.06 | -19.93 | -82.73 | 28.63 | 2.00 | 2.00 | 0.00 |
| 2,800.00 | 16.00 | 256.46 | 2,789.64 | -25.98 | -107.89 | 37.34 | 2.00 | 2.00 | 0.00 |
| 2,823.12 | 16.46 | 256.46 | 2,811.84 | -27.50 | -114.17 | 39.52 | 2.00 | 2.00 | 0.00 |
| Hold: 16.46° Inc, 256.46° Azm | | | | | | | | | |
| 2,900.00 | 16.46 | 256.46 | 2,885.57 | -32.60 | -135.36 | 46.85 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 16.46 | 256.46 | 2,981.47 | -39.23 | -162.91 | 56.38 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 16.46 | 256.46 | 3,077.37 | -45.87 | -190.46 | 65.92 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 16.46 | 256.46 | 3,173.27 | -52.51 | -218.01 | 75.46 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 16.46 | 256.46 | 3,269.17 | -59.14 | -245.56 | 84.99 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 16.46 | 256.46 | 3,365.07 | -65.78 | -273.11 | 94.53 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 16.46 | 256.46 | 3,460.97 | -72.41 | -300.66 | 104.06 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 16.46 | 256.46 | 3,556.87 | -79.05 | -328.21 | 113.60 | 0.00 | 0.00 | 0.00 |
| 3,688.76 | 16.46 | 256.46 | 3,642.00 | -84.94 | -352.67 | 122.06 | 0.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | |
| 3,700.00 | 16.46 | 256.46 | 3,652.77 | -85.68 | -355.76 | 123.13 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 16.46 | 256.46 | 3,748.68 | -92.32 | -383.31 | 132.67 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 16.46 | 256.46 | 3,844.58 | -98.95 | -410.86 | 142.20 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 16.46 | 256.46 | 3,940.48 | -105.59 | -438.41 | 151.74 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 16.46 | 256.46 | 4,036.38 | -112.22 | -465.96 | 161.28 | 0.00 | 0.00 | 0.00 |

Noble Energy, Inc.
Planning Report

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|------------------|----------------------------|-------------------------------------|----------------------|
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| Company: | Northern Region - DJ Basin | TVD Reference: | KB @ 4736.00ft |
| Project: | Wells Ranch | MD Reference: | KB @ 4736.00ft |
| Site: | A Section 20 | North Reference: | Grid |
| Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Rampart A32-751 | | |
| 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 (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 4,200.00 | 16.46 | 256.46 | 4,132.28 | -118.86 | -493.52 | 170.81 | 0.00 | 0.00 | 0.00 |
| 4,228.91 | 16.46 | 256.46 | 4,160.00 | -120.78 | -501.48 | 173.57 | 0.00 | 0.00 | 0.00 |
| Sussex | | | | | | | | | |
| 4,300.00 | 16.46 | 256.46 | 4,228.18 | -125.49 | -521.07 | 180.35 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 16.46 | 256.46 | 4,324.08 | -132.13 | -548.62 | 189.88 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 16.46 | 256.46 | 4,419.98 | -138.77 | -576.17 | 199.42 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 16.46 | 256.46 | 4,515.88 | -145.40 | -603.72 | 208.95 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 16.46 | 256.46 | 4,611.78 | -152.04 | -631.27 | 218.49 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 16.46 | 256.46 | 4,707.68 | -158.67 | -658.82 | 228.03 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 16.46 | 256.46 | 4,803.58 | -165.31 | -686.37 | 237.56 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 16.46 | 256.46 | 4,899.48 | -171.94 | -713.92 | 247.10 | 0.00 | 0.00 | 0.00 |
| 5,096.47 | 16.46 | 256.46 | 4,992.00 | -178.34 | -740.50 | 256.30 | 0.00 | 0.00 | 0.00 |
| Shannon | | | | | | | | | |
| 5,100.00 | 16.46 | 256.46 | 4,995.38 | -178.58 | -741.47 | 256.63 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 16.46 | 256.46 | 5,091.28 | -185.21 | -769.02 | 266.17 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 16.46 | 256.46 | 5,187.18 | -191.85 | -796.57 | 275.70 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 16.46 | 256.46 | 5,283.09 | -198.48 | -824.12 | 285.24 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 16.46 | 256.46 | 5,378.99 | -205.12 | -851.68 | 294.78 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 16.46 | 256.46 | 5,474.89 | -211.75 | -879.23 | 304.31 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 16.46 | 256.46 | 5,570.79 | -218.39 | -906.78 | 313.85 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 16.46 | 256.46 | 5,666.69 | -225.03 | -934.33 | 323.38 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 16.46 | 256.46 | 5,762.59 | -231.66 | -961.88 | 332.92 | 0.00 | 0.00 | 0.00 |
| 6,000.00 | 16.46 | 256.46 | 5,858.49 | -238.30 | -989.43 | 342.45 | 0.00 | 0.00 | 0.00 |
| 6,087.08 | 16.46 | 256.46 | 5,942.00 | -244.07 | -1,013.42 | 350.76 | 0.00 | 0.00 | 0.00 |
| Teepee Buttes | | | | | | | | | |
| 6,100.00 | 16.46 | 256.46 | 5,954.39 | -244.93 | -1,016.98 | 351.99 | 0.00 | 0.00 | 0.00 |
| 6,200.00 | 16.46 | 256.46 | 6,050.29 | -251.57 | -1,044.53 | 361.52 | 0.00 | 0.00 | 0.00 |
| 6,300.00 | 16.46 | 256.46 | 6,146.19 | -258.20 | -1,072.08 | 371.06 | 0.00 | 0.00 | 0.00 |
| 6,364.22 | 16.46 | 256.46 | 6,207.78 | -262.46 | -1,089.77 | 377.18 | 0.00 | 0.00 | 0.00 |
| KOP: Build 9°/100' @ 6364.22' MD | | | | | | | | | |
| 6,400.00 | 17.43 | 245.90 | 6,242.01 | -265.84 | -1,099.60 | 381.59 | 9.00 | 2.70 | -29.51 |
| 6,450.00 | 19.58 | 233.40 | 6,289.44 | -273.90 | -1,113.16 | 391.04 | 9.00 | 4.30 | -25.00 |
| 6,500.00 | 22.41 | 223.61 | 6,336.13 | -285.80 | -1,126.47 | 404.30 | 9.00 | 5.67 | -19.58 |
| 6,550.00 | 25.70 | 216.06 | 6,381.80 | -301.47 | -1,139.44 | 421.26 | 9.00 | 6.58 | -15.10 |
| 6,600.00 | 29.30 | 210.19 | 6,426.15 | -320.82 | -1,151.98 | 441.84 | 9.00 | 7.19 | -11.75 |
| 6,650.00 | 33.10 | 205.53 | 6,468.91 | -343.72 | -1,164.02 | 465.90 | 9.00 | 7.60 | -9.32 |
| 6,700.00 | 37.04 | 201.74 | 6,509.83 | -370.05 | -1,175.49 | 493.29 | 9.00 | 7.88 | -7.57 |
| 6,750.00 | 41.08 | 198.59 | 6,548.66 | -399.62 | -1,186.31 | 523.85 | 9.00 | 8.08 | -6.29 |
| 6,800.00 | 45.19 | 195.92 | 6,585.14 | -432.26 | -1,196.42 | 557.39 | 9.00 | 8.23 | -5.34 |
| 6,845.33 | 48.97 | 193.82 | 6,616.00 | -464.34 | -1,204.92 | 590.19 | 9.00 | 8.33 | -4.65 |
| Sharon Springs | | | | | | | | | |
| 6,850.00 | 49.36 | 193.61 | 6,619.05 | -467.78 | -1,205.75 | 593.69 | 9.00 | 8.38 | -4.35 |
| 6,891.32 | 52.84 | 191.91 | 6,645.00 | -499.13 | -1,212.84 | 625.63 | 9.00 | 8.41 | -4.12 |
| Top A Chalk | | | | | | | | | |
| 6,900.00 | 53.57 | 191.57 | 6,650.20 | -505.94 | -1,214.26 | 632.55 | 9.00 | 8.44 | -3.89 |
| 6,925.59 | 55.74 | 190.61 | 6,665.00 | -526.42 | -1,218.27 | 653.34 | 9.00 | 8.47 | -3.75 |
| Top A Marl | | | | | | | | | |
| 6,950.00 | 57.81 | 189.75 | 6,678.38 | -546.52 | -1,221.88 | 673.71 | 9.00 | 8.49 | -3.56 |
| 7,000.00 | 62.07 | 188.08 | 6,703.42 | -589.26 | -1,228.57 | 716.92 | 9.00 | 8.53 | -3.33 |
| 7,050.00 | 66.35 | 186.54 | 6,725.16 | -633.90 | -1,234.29 | 761.92 | 9.00 | 8.56 | -3.08 |
| 7,100.00 | 70.65 | 185.10 | 6,743.48 | -680.17 | -1,239.00 | 808.43 | 9.00 | 8.59 | -2.88 |
| 7,148.99 | 74.87 | 183.76 | 6,758.00 | -726.81 | -1,242.60 | 855.18 | 9.00 | 8.61 | -2.73 |
| Top B Chalk | | | | | | | | | |

Noble Energy, Inc.

Planning Report

| | | | |
|------------------|----------------------------|-------------------------------------|----------------------|
| Database: | EDMP | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Company: | Northern Region - DJ Basin | TVD Reference: | KB @ 4736.00ft |
| Project: | Wells Ranch | MD Reference: | KB @ 4736.00ft |
| Site: | A Section 20 | North Reference: | Grid |
| Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Rampart A32-751 | | |
| 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 (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 7,150.00 | 74.96 | 183.74 | 6,758.26 | -727.78 | -1,242.67 | 856.16 | 9.00 | 8.62 | -2.67 |
| 7,200.00 | 79.27 | 182.42 | 6,769.41 | -776.44 | -1,245.28 | 904.82 | 9.00 | 8.63 | -2.62 |
| 7,250.00 | 83.59 | 181.15 | 6,776.86 | -825.85 | -1,246.82 | 954.10 | 9.00 | 8.64 | -2.55 |
| 7,300.00 | 87.91 | 179.90 | 6,780.56 | -875.70 | -1,247.28 | 1,003.72 | 9.00 | 8.65 | -2.51 |
| 7,324.11 | 90.00 | 179.30 | 6,781.00 | -899.80 | -1,247.11 | 1,027.67 | 9.00 | 8.65 | -2.49 |
| TPZ/LP: 7324.11' MD, 90.00° Inc, 179.30° Azm | | | | | | | | | |
| 7,400.00 | 90.00 | 179.30 | 6,781.00 | -975.68 | -1,246.17 | 1,103.02 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 90.00 | 179.30 | 6,781.00 | -1,075.68 | -1,244.94 | 1,202.31 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 90.00 | 179.30 | 6,781.00 | -1,175.67 | -1,243.71 | 1,301.60 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 90.00 | 179.30 | 6,781.00 | -1,275.66 | -1,242.49 | 1,400.89 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.00 | 179.30 | 6,781.00 | -1,375.65 | -1,241.26 | 1,500.18 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.00 | 179.30 | 6,781.00 | -1,475.65 | -1,240.03 | 1,599.47 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.00 | 179.30 | 6,781.00 | -1,575.64 | -1,238.80 | 1,698.76 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.00 | 179.30 | 6,781.00 | -1,675.63 | -1,237.57 | 1,798.05 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 179.30 | 6,781.00 | -1,775.62 | -1,236.34 | 1,897.35 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.00 | 179.30 | 6,781.00 | -1,875.62 | -1,235.11 | 1,996.64 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 179.30 | 6,781.00 | -1,975.61 | -1,233.88 | 2,095.93 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.00 | 179.30 | 6,781.00 | -2,075.60 | -1,232.65 | 2,195.22 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 179.30 | 6,781.00 | -2,175.59 | -1,231.42 | 2,294.51 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 179.30 | 6,781.00 | -2,275.59 | -1,230.19 | 2,393.80 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 179.30 | 6,781.00 | -2,375.58 | -1,228.97 | 2,493.09 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 179.30 | 6,781.00 | -2,475.57 | -1,227.74 | 2,592.38 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.00 | 179.30 | 6,781.00 | -2,575.56 | -1,226.51 | 2,691.67 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 179.30 | 6,781.00 | -2,675.56 | -1,225.28 | 2,790.97 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 179.30 | 6,781.00 | -2,775.55 | -1,224.05 | 2,890.26 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 179.30 | 6,781.00 | -2,875.54 | -1,222.82 | 2,989.55 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.00 | 179.30 | 6,781.00 | -2,975.53 | -1,221.59 | 3,088.84 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 179.30 | 6,781.00 | -3,075.53 | -1,220.36 | 3,188.13 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 179.30 | 6,781.00 | -3,175.52 | -1,219.13 | 3,287.42 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 179.30 | 6,781.00 | -3,275.51 | -1,217.90 | 3,386.71 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 179.30 | 6,781.00 | -3,375.50 | -1,216.67 | 3,486.00 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 179.30 | 6,781.00 | -3,475.49 | -1,215.45 | 3,585.29 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 179.30 | 6,781.00 | -3,575.49 | -1,214.22 | 3,684.59 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 179.30 | 6,781.00 | -3,675.48 | -1,212.99 | 3,783.88 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 179.30 | 6,781.00 | -3,775.47 | -1,211.76 | 3,883.17 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 179.30 | 6,781.00 | -3,875.46 | -1,210.53 | 3,982.46 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 179.30 | 6,781.00 | -3,975.46 | -1,209.30 | 4,081.75 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 179.30 | 6,781.00 | -4,075.45 | -1,208.07 | 4,181.04 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 179.30 | 6,781.00 | -4,175.44 | -1,206.84 | 4,280.33 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 179.30 | 6,781.00 | -4,275.43 | -1,205.61 | 4,379.62 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 179.30 | 6,781.00 | -4,375.43 | -1,204.38 | 4,478.92 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 179.30 | 6,781.00 | -4,475.42 | -1,203.15 | 4,578.21 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 179.30 | 6,781.00 | -4,575.41 | -1,201.93 | 4,677.50 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 179.30 | 6,781.00 | -4,675.40 | -1,200.70 | 4,776.79 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 179.30 | 6,781.00 | -4,775.40 | -1,199.47 | 4,876.08 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 179.30 | 6,781.00 | -4,875.39 | -1,198.24 | 4,975.37 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 179.30 | 6,781.00 | -4,975.38 | -1,197.01 | 5,074.66 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 179.30 | 6,781.00 | -5,075.37 | -1,195.78 | 5,173.95 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 179.30 | 6,781.00 | -5,175.37 | -1,194.55 | 5,273.24 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 179.30 | 6,781.00 | -5,275.36 | -1,193.32 | 5,372.54 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 179.30 | 6,781.00 | -5,375.35 | -1,192.09 | 5,471.83 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 179.30 | 6,781.00 | -5,475.34 | -1,190.86 | 5,571.12 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 179.30 | 6,781.00 | -5,575.34 | -1,189.63 | 5,670.41 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 179.30 | 6,781.00 | -5,675.33 | -1,188.41 | 5,769.70 | 0.00 | 0.00 | 0.00 |

Noble Energy, Inc.
Planning Report

| | | | |
|------------------|----------------------------|-------------------------------------|----------------------|
| Database: | EDMP | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Company: | Northern Region - DJ Basin | TVD Reference: | KB @ 4736.00ft |
| Project: | Wells Ranch | MD Reference: | KB @ 4736.00ft |
| Site: | A Section 20 | North Reference: | Grid |
| Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Rampart A32-751 | | |
| 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 (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 12,200.00 | 90.00 | 179.30 | 6,781.00 | -5,775.32 | -1,187.18 | 5,868.99 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 179.30 | 6,781.00 | -5,875.31 | -1,185.95 | 5,968.28 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 179.30 | 6,781.00 | -5,975.31 | -1,184.72 | 6,067.57 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 179.30 | 6,781.00 | -6,075.30 | -1,183.49 | 6,166.86 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 179.30 | 6,781.00 | -6,175.29 | -1,182.26 | 6,266.16 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 179.30 | 6,781.00 | -6,275.28 | -1,181.03 | 6,365.45 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 179.30 | 6,781.00 | -6,375.28 | -1,179.80 | 6,464.74 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 179.30 | 6,781.00 | -6,475.27 | -1,178.57 | 6,564.03 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 179.30 | 6,781.00 | -6,575.26 | -1,177.34 | 6,663.32 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 179.30 | 6,781.00 | -6,675.25 | -1,176.11 | 6,762.61 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 179.30 | 6,781.00 | -6,775.25 | -1,174.89 | 6,861.90 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 179.30 | 6,781.00 | -6,875.24 | -1,173.66 | 6,961.19 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 179.30 | 6,781.00 | -6,975.23 | -1,172.43 | 7,060.48 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 179.30 | 6,781.00 | -7,075.22 | -1,171.20 | 7,159.78 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 179.30 | 6,781.00 | -7,175.22 | -1,169.97 | 7,259.07 | 0.00 | 0.00 | 0.00 |
| 13,700.00 | 90.00 | 179.30 | 6,781.00 | -7,275.21 | -1,168.74 | 7,358.36 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 179.30 | 6,781.00 | -7,375.20 | -1,167.51 | 7,457.65 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 179.30 | 6,781.00 | -7,475.19 | -1,166.28 | 7,556.94 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 179.30 | 6,781.00 | -7,575.19 | -1,165.05 | 7,656.23 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 179.30 | 6,781.00 | -7,675.18 | -1,163.82 | 7,755.52 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 179.30 | 6,781.00 | -7,775.17 | -1,162.59 | 7,854.81 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 179.30 | 6,781.00 | -7,875.16 | -1,161.37 | 7,954.11 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 179.30 | 6,781.00 | -7,975.16 | -1,160.14 | 8,053.40 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 179.30 | 6,781.00 | -8,075.15 | -1,158.91 | 8,152.69 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 179.30 | 6,781.00 | -8,175.14 | -1,157.68 | 8,251.98 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 179.30 | 6,781.00 | -8,275.13 | -1,156.45 | 8,351.27 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 179.30 | 6,781.00 | -8,375.12 | -1,155.22 | 8,450.56 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 179.30 | 6,781.00 | -8,475.12 | -1,153.99 | 8,549.85 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 179.30 | 6,781.00 | -8,575.11 | -1,152.76 | 8,649.14 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 179.30 | 6,781.00 | -8,675.10 | -1,151.53 | 8,748.43 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 179.30 | 6,781.00 | -8,775.09 | -1,150.30 | 8,847.73 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 179.30 | 6,781.00 | -8,875.09 | -1,149.07 | 8,947.02 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 179.30 | 6,781.00 | -8,975.08 | -1,147.85 | 9,046.31 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 179.30 | 6,781.00 | -9,075.07 | -1,146.62 | 9,145.60 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.00 | 179.30 | 6,781.00 | -9,175.06 | -1,145.39 | 9,244.89 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 179.30 | 6,781.00 | -9,275.06 | -1,144.16 | 9,344.18 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 179.30 | 6,781.00 | -9,375.05 | -1,142.93 | 9,443.47 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 179.30 | 6,781.00 | -9,475.04 | -1,141.70 | 9,542.76 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 179.30 | 6,781.00 | -9,575.03 | -1,140.47 | 9,642.05 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 179.30 | 6,781.00 | -9,675.03 | -1,139.24 | 9,741.35 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 179.30 | 6,781.00 | -9,775.02 | -1,138.01 | 9,840.64 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 179.30 | 6,781.00 | -9,875.01 | -1,136.78 | 9,939.93 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.00 | 179.30 | 6,781.00 | -9,975.00 | -1,135.56 | 10,039.22 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.00 | 179.30 | 6,781.00 | -10,075.00 | -1,134.33 | 10,138.51 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 90.00 | 179.30 | 6,781.00 | -10,174.99 | -1,133.10 | 10,237.80 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 90.00 | 179.30 | 6,781.00 | -10,274.98 | -1,131.87 | 10,337.09 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 90.00 | 179.30 | 6,781.00 | -10,374.97 | -1,130.64 | 10,436.38 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 90.00 | 179.30 | 6,781.00 | -10,474.97 | -1,129.41 | 10,535.68 | 0.00 | 0.00 | 0.00 |
| 16,949.50 | 90.00 | 179.30 | 6,781.00 | -10,524.46 | -1,128.80 | 10,584.82 | 0.00 | 0.00 | 0.00 |
| TD @ 16949.50' MD/6781.00' TVD | | | | | | | | | |

Noble Energy, Inc.

Planning Report

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|------------------|----------------------------|-------------------------------------|----------------------|
| Database: | EDMP | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Company: | Northern Region - DJ Basin | TVD Reference: | KB @ 4736.00ft |
| Project: | Wells Ranch | MD Reference: | KB @ 4736.00ft |
| Site: | A Section 20 | North Reference: | Grid |
| Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Rampart A32-751 | | |
| Design: | APD-Rev 0 | | |

| Design Targets | | | | | | | | | |
|---|-----------|----------|----------|------------|-----------|--------------|--------------|------------|--------------|
| Target Name | | | | | | | | | |
| - hit/miss target | Dip Angle | Dip Dir. | TVD | +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
| - Shape | (°) | (°) | (ft) | (ft) | (ft) | (usft) | (usft) | | |
| SHL-RAMPART A32- - plan misses target center by 2430.41ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E) - Point | 0.00 | 0.00 | 0.00 | 462.60 | 2,385.98 | 1,414,202.83 | 3,261,231.91 | 40.4665920 | -104.5610990 |
| KOP-RAMPART A32- - plan hits target center - Point | 0.00 | 0.00 | 6,207.78 | -262.46 | -1,089.77 | 1,413,477.76 | 3,257,756.17 | 40.4647022 | -104.5736176 |
| TPZ-RAMPART A32- - plan hits target center - Point | 0.00 | 0.00 | 6,781.00 | -899.80 | -1,247.11 | 1,412,840.43 | 3,257,598.84 | 40.4629573 | -104.5742069 |
| BHL-RAMPART A32- - plan hits target center - Point | 0.00 | 0.00 | 6,781.00 | -10,524.46 | -1,128.80 | 1,403,215.79 | 3,257,717.14 | 40.4365359 | -104.5741429 |

| Formations | | | | | | |
|----------------|----------------|---------------------------|-----------|-----|---------------|--|
| Measured Depth | Vertical Depth | Name | Lithology | Dip | Dip Direction | |
| (ft) | (ft) | | | (°) | (°) | |
| 453.00 | 453.00 | Pierre | | | | |
| 475.00 | 475.00 | Upper Pierre Aquifer Top | | | | |
| 1,512.00 | 1,512.00 | Upper Pierre Aquifer Base | | | | |
| 3,688.76 | 3,642.00 | Parkman | | | | |
| 4,228.91 | 4,160.00 | Sussex | | | | |
| 5,096.47 | 4,992.00 | Shannon | | | | |
| 6,087.08 | 5,942.00 | Teepee Buttes | | | | |
| 6,845.33 | 6,616.00 | Sharon Springs | | | | |
| 6,891.32 | 6,645.00 | Top A Chalk | | | | |
| 6,925.59 | 6,665.00 | Top A Marl | | | | |
| 7,148.99 | 6,758.00 | Top B Chalk | | | | |

| Plan Annotations | | | | |
|------------------|----------------|-------------------|------------|--|
| Measured Depth | Vertical Depth | Local Coordinates | | Comment |
| (ft) | (ft) | +N/-S (ft) | +E/-W (ft) | |
| 2,000.00 | 2,000.00 | 0.00 | 0.00 | Build: 2°/100' |
| 2,823.12 | 2,811.84 | -27.50 | -114.17 | Hold: 16.46° Inc, 256.46° Azm |
| 6,364.22 | 6,207.78 | -262.46 | -1,089.77 | KOP: Build 9°/100' @ 6364.22' MD |
| 7,324.11 | 6,781.00 | -899.80 | -1,247.11 | TPZ/LP: 7324.11' MD, 90.00° Inc, 179.30° Azm |
| 16,949.50 | 6,781.00 | -10,524.46 | -1,128.80 | TD @ 16949.50' MD/6781.00' TVD |

Northern Region - DJ Basin

Wells Ranch

A Section 20

Rampart A32-751

Rampart A32-751

APD-Rev 0

Anticollision Summary Report

01 November, 2018

Noble Energy, Inc.

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| 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 10,000.00 ft | Error Surface: | Pedal Curve |
| Warning Levels Evaluated at: | 2.00 Sigma | Casing Method: | Not applied |

| | | | | |
|----------------------------|----------------|-----------------------------|-------------------|--|
| Survey Tool Program | Date | 10/31/2018 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.00 | 2,001.99 | APD-Rev 0 (Rampart A32-751) | 2_Gyro-NS-CT_OWSG | A021Ga: Continuous gyro in casing |
| 2,001.99 | 16,949.50 | APD-Rev 0 (Rampart A32-751) | 2_MWD+IFR1+MS | A008Mb: IFR dec & multi-station analysis |

| Summary | | | | | | |
|---|--|-------------------------------------|--|---|----------------------|------------|
| Site Name Offset Well - Wellbore - Design | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| A Section 20 | | | | | | |
| Foe 16-20 - Original Drilling - Original Drilling - As Drilled | 1,549.45 | 1,523.60 | 762.25 | 751.91 | 73.723 | CC |
| Foe 16-20 - Original Drilling - Original Drilling - As Drilled | 2,000.00 | 1,970.72 | 763.37 | 749.90 | 56.659 | ES |
| Foe 16-20 - Original Drilling - Original Drilling - As Drilled | 6,500.00 | 6,306.50 | 1,939.19 | 1,898.64 | 47.817 | SF |
| Foe 33-20 - Original Drilling - Original Drilling - As Drilled | 3,065.61 | 3,028.10 | 1,430.55 | 1,412.15 | 77.773 | CC |
| Foe 33-20 - Original Drilling - Original Drilling - As Drilled | 3,200.00 | 3,159.19 | 1,430.94 | 1,411.80 | 74.769 | ES |
| Foe 33-20 - Original Drilling - Original Drilling - As Drilled | 6,450.00 | 6,295.30 | 1,725.18 | 1,684.37 | 42.272 | SF |
| Foe 34-20 (PA) - Original Drilling - Original Drilling - As D | 4,338.78 | 4,229.37 | 177.52 | 81.34 | 1.846 | CC |
| Foe 34-20 (PA) - Original Drilling - Original Drilling - As D | 4,400.00 | 4,288.08 | 178.36 | 80.82 | 1.829 | ES, SF |
| Foe 43-20 - Original Drilling - Original Drilling - As Drilled | 1,740.44 | 1,733.49 | 1,924.55 | 1,912.80 | 163.720 | CC |
| Foe 43-20 - Original Drilling - Original Drilling - As Drilled | 2,100.00 | 2,121.53 | 1,924.86 | 1,910.66 | 135.573 | ES |
| Foe 43-20 - Original Drilling - Original Drilling - As Drilled | 6,550.00 | 6,346.14 | 2,846.71 | 2,805.78 | 69.558 | SF |
| Linda Rae 1 - Original Drilling - Original Drilling - As Drille | 6,872.06 | 6,635.25 | 3,648.61 | 3,599.65 | 74.518 | CC, ES |
| Linda Rae 1 - Original Drilling - Original Drilling - As Drille | 7,300.00 | 6,783.30 | 3,719.91 | 3,667.81 | 71.397 | SF |
| Rampart A32-721 - Rampart A32-721 - APD-Rev 1 | 2,075.34 | 2,076.52 | 22.30 | 8.46 | 1.611 | CC |
| Rampart A32-721 - Rampart A32-721 - APD-Rev 1 | 2,100.00 | 2,101.19 | 22.35 | 8.42 | 1.605 | ES, SF |
| Rampart A32-730 - Rampart A32-730 - APD-Rev 0 | 2,242.04 | 2,241.76 | 43.85 | 29.86 | 3.135 | CC, ES, SF |
| Rampart A32-739 - Rampart A32-739 - APD-Rev 1 | 2,000.00 | 2,000.00 | 22.59 | 9.02 | 1.665 | CC |
| Rampart A32-739 - Rampart A32-739 - APD-Rev 1 | 2,100.00 | 2,099.68 | 22.89 | 8.97 | 1.644 | ES, SF |
| Rampart A33-780 - Rampart A33-780 - APD-Rev 0 | 2,002.46 | 2,003.47 | 67.42 | 53.84 | 4.965 | CC |
| Rampart A33-780 - Rampart A33-780 - APD-Rev 0 | 2,100.00 | 2,101.27 | 67.62 | 53.69 | 4.855 | ES, SF |
| Rampart A33-790 - Rampart A33-790 - APD-Rev 0 | 2,021.37 | 2,022.45 | 44.95 | 31.30 | 3.293 | CC |
| Rampart A33-790 - Rampart A33-790 - APD-Rev 0 | 2,100.00 | 2,101.24 | 45.08 | 31.15 | 3.237 | ES, SF |
| Simmons 42-20D - Original Drilling - Original Drilling - As | 2,037.56 | 2,085.29 | 3,235.89 | 3,222.18 | 236.009 | CC, ES |
| Simmons 42-20D - Original Drilling - Original Drilling - As | 6,650.00 | 6,507.73 | 3,810.34 | 3,768.11 | 90.245 | SF |
| Snider 1-20EG - Original Drilling - Original Drilling - As D | 6,570.78 | 6,368.60 | 902.79 | 860.99 | 21.595 | CC, ES |
| Snider 1-20EG - Original Drilling - Original Drilling - As D | 6,700.00 | 6,469.98 | 913.59 | 870.84 | 21.374 | SF |
| Stump A20-11 - Original Drilling - Original Drilling - As Dr | 6,440.48 | 6,310.57 | 1,911.93 | 1,870.62 | 46.277 | CC, ES |
| Stump A20-11 - Original Drilling - Original Drilling - As Dr | 6,650.00 | 6,535.72 | 1,943.14 | 1,900.24 | 45.299 | SF |
| Stump A20-12 - Original Drilling - Original Drilling - As Dr | 6,475.75 | 6,248.82 | 2,808.50 | 2,767.31 | 68.176 | CC, ES |
| Stump A20-12 - Original Drilling - Original Drilling - As Dr | 6,800.00 | 6,569.80 | 2,871.32 | 2,827.75 | 65.899 | SF |
| Stump A20-13 - Original Drilling - Original Drilling - As Dr | 6,800.09 | 6,554.23 | 2,066.24 | 2,023.23 | 48.038 | CC, ES |
| Stump A20-13 - Original Drilling - Original Drilling - As Dr | 7,050.00 | 6,718.82 | 2,094.40 | 2,049.85 | 47.012 | SF |
| Winter 20-19 - Original Drilling - Original Drilling - As Dril | 6,732.83 | 6,543.25 | 4,076.02 | 4,031.27 | 91.081 | CC, ES |
| Winter 20-19 - Original Drilling - Original Drilling - As Dril | 7,150.00 | 6,790.08 | 4,144.60 | 4,097.71 | 88.385 | SF |
| Winter 24-19 - Original Drilling - Original Drilling - As Dril | 6,571.11 | 6,692.29 | 4,460.67 | 4,406.70 | 82.645 | CC, ES |
| Winter 24-19 - Original Drilling - Original Drilling - As Dril | 6,850.00 | 6,860.25 | 4,501.17 | 4,446.07 | 81.698 | SF |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.
Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

| 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 Section 20 | | | | | | |
| Winter 39-19 - Original Drilling - Original Drilling - As Dril | 6,716.50 | 6,627.21 | 2,899.16 | 2,848.08 | 56.757 | CC, ES |
| Winter 39-19 - Original Drilling - Original Drilling - As Dril | 7,200.00 | 6,864.73 | 3,003.95 | 2,948.72 | 54.395 | SF |
| Winter 40-19 - Original Drilling - Original Drilling - As Dril | 6,523.38 | 6,641.74 | 3,393.19 | 3,318.49 | 45.426 | CC, ES |
| Winter 40-19 - Original Drilling - Original Drilling - As Dril | 6,700.00 | 6,818.59 | 3,410.01 | 3,334.48 | 45.147 | SF |

Noble Energy, Inc.

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

| 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 Section 21 | | | | | | |
| Culbreath 23-21 - Original Drilling - Original Drilling - As I | 1,419.42 | 1,415.48 | 3,959.28 | 3,949.77 | 416.069 | CC |
| Culbreath 23-21 - Original Drilling - Original Drilling - As I | 2,000.00 | 1,982.58 | 3,960.64 | 3,947.12 | 292.970 | ES |
| Culbreath 23-21 - Original Drilling - Original Drilling - As I | 7,000.00 | 6,715.23 | 5,338.60 | 5,295.10 | 122.712 | SF |
| Culbreath 33-21 (PA) - Original Drilling - Original Drilling | 2,000.00 | 1,982.00 | 4,917.44 | 4,871.04 | 105.985 | CC |
| Culbreath 33-21 (PA) - Original Drilling - Original Drilling | 2,100.00 | 2,081.98 | 4,919.18 | 4,870.60 | 101.270 | ES |
| Culbreath 33-21 (PA) - Original Drilling - Original Drilling | 7,050.00 | 6,707.16 | 6,293.09 | 6,138.58 | 40.728 | SF |
| Harper A21-618 - Original Drilling - APD - Rev 1 | 2,022.22 | 2,061.42 | 2,346.77 | 2,332.83 | 168.351 | CC, ES |
| Harper A21-618 - Original Drilling - APD - Rev 1 | 6,400.00 | 6,200.00 | 3,395.70 | 3,355.79 | 85.082 | SF |
| Harper A21-626 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,021.00 | 2,351.27 | 2,337.51 | 170.785 | CC, ES |
| Harper A21-626 - Original Drilling - APD - Rev 1 | 6,364.22 | 6,226.10 | 3,474.75 | 3,434.51 | 86.350 | SF |
| Harper A21-631 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,021.00 | 2,355.71 | 2,341.94 | 171.106 | CC, ES |
| Harper A21-631 - Original Drilling - APD - Rev 1 | 6,400.00 | 6,171.03 | 3,585.81 | 3,545.67 | 89.331 | SF |
| Harper A21-637 - Original Drilling - APD - Rev 1 | 1,907.81 | 1,928.81 | 2,360.55 | 2,347.44 | 179.985 | CC |
| Harper A21-637 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,018.46 | 2,360.56 | 2,346.81 | 171.573 | ES |
| Harper A21-637 - Original Drilling - APD - Rev 1 | 6,700.00 | 6,304.29 | 3,840.01 | 3,798.25 | 91.954 | SF |
| Harper A21-643 - Original Drilling - APD - Rev 1 | 2,186.84 | 2,401.55 | 2,984.31 | 2,969.05 | 195.532 | CC |
| Harper A21-643 - Original Drilling - APD - Rev 1 | 2,200.00 | 2,411.61 | 2,984.34 | 2,969.04 | 195.058 | ES |
| Harper A21-643 - Original Drilling - APD - Rev 1 | 6,400.00 | 6,200.00 | 3,790.58 | 3,750.55 | 94.699 | SF |
| Harper A21-649 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,036.00 | 3,004.19 | 2,990.36 | 217.193 | CC, ES |
| Harper A21-649 - Original Drilling - APD - Rev 1 | 6,400.00 | 6,250.00 | 3,967.54 | 3,927.06 | 98.012 | SF |
| Harper A21-656 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,036.00 | 3,029.70 | 3,015.87 | 219.035 | CC, ES |
| Harper A21-656 - Original Drilling - APD - Rev 1 | 6,500.00 | 6,200.00 | 4,161.94 | 4,121.18 | 102.108 | SF |
| Harper A21-664 - Original Drilling - APD - Rev 2 | 2,000.00 | 2,036.00 | 3,043.52 | 3,029.69 | 220.032 | CC, ES |
| Harper A21-664 - Original Drilling - APD - Rev 2 | 6,650.00 | 6,036.45 | 4,527.79 | 4,487.05 | 111.143 | SF |
| Harper A21-669 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,037.00 | 3,046.87 | 3,033.03 | 220.213 | CC, ES |
| Harper A21-669 - Original Drilling - APD - Rev 1 | 6,550.00 | 5,708.35 | 4,647.73 | 4,608.63 | 118.852 | SF |
| Harper A21-674 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,037.00 | 3,060.88 | 3,047.04 | 221.223 | CC, ES |
| Harper A21-674 - Original Drilling - APD - Rev 1 | 6,600.00 | 5,485.06 | 4,846.03 | 4,807.70 | 126.456 | SF |
| Harper A21-681 - Original Drilling - APD - Rev 1 | 1,906.24 | 1,944.24 | 3,086.84 | 3,073.66 | 234.280 | CC |
| Harper A21-681 - Original Drilling - APD - Rev 1 | 2,000.00 | 2,023.20 | 3,086.93 | 3,073.14 | 223.909 | ES |
| Harper A21-681 - Original Drilling - APD - Rev 1 | 6,600.00 | 4,961.67 | 5,142.26 | 5,106.68 | 144.535 | SF |
| Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drill | 6,726.20 | 10,591.18 | 433.40 | 369.22 | 6.753 | CC |
| Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drill | 6,750.00 | 10,596.72 | 434.45 | 368.96 | 6.634 | ES |
| Kona A19-616 - Kona A19-616 - Kona A19-616 - As Drill | 6,800.00 | 10,607.91 | 443.46 | 375.54 | 6.529 | SF |
| Kona A19-624 - Kona A19-624 - Kona A19-624 - As Drill | 6,656.21 | 10,852.16 | 949.70 | 882.91 | 14.218 | CC, ES |
| Kona A19-624 - Kona A19-624 - Kona A19-624 - As Drill | 6,800.00 | 10,884.61 | 975.54 | 905.18 | 13.866 | SF |
| Kona A19-636 - Kona A19-636 - Kona A19-636 - As Drill | 6,501.15 | 10,958.00 | 1,624.37 | 1,553.12 | 22.798 | CC, ES |
| Kona A19-636 - Kona A19-636 - Kona A19-636 - As Drill | 6,650.00 | 10,974.10 | 1,648.10 | 1,574.80 | 22.483 | SF |
| Kona A19-646 - Original Drilling - Original Drilling - As Dr | 6,464.09 | 10,620.87 | 2,304.44 | 2,236.95 | 34.143 | CC, ES |
| Kona A19-646 - Original Drilling - Original Drilling - As Dr | 6,600.00 | 10,634.78 | 2,322.57 | 2,253.86 | 33.801 | SF |
| Kona A19-662 - Original Drilling - Original Drilling - As Dr | 1,878.26 | 1,916.37 | 3,182.13 | 3,169.28 | 247.643 | CC |
| Kona A19-662 - Original Drilling - Original Drilling - As Dr | 1,900.00 | 1,932.26 | 3,182.15 | 3,169.17 | 245.135 | ES |
| Kona A19-662 - Original Drilling - Original Drilling - As Dr | 6,900.00 | 10,675.26 | 3,518.73 | 3,447.82 | 49.619 | SF |
| Kona A19-670 - Kona A19-670 - Original Drilling - As Drill | 1,912.70 | 1,950.72 | 3,201.80 | 3,188.75 | 245.270 | CC, ES |
| Kona A19-670 - Kona A19-670 - Original Drilling - As Drill | 6,700.00 | 11,132.69 | 4,027.31 | 3,952.57 | 53.888 | SF |
| Kona A19-685 - Original Drilling - Original Drilling - As Dr | 1,941.92 | 1,979.03 | 3,169.60 | 3,156.36 | 239.421 | CC |
| Kona A19-685 - Original Drilling - Original Drilling - As Dr | 2,000.00 | 2,018.47 | 3,169.77 | 3,156.30 | 235.393 | ES |
| Kona A19-685 - Original Drilling - Original Drilling - As Dr | 6,850.00 | 12,004.43 | 4,880.02 | 4,811.20 | 70.909 | SF |
| McKee 12-21 (PA) - Original Drilling - Original Drilling - A | 2,000.00 | 2,018.00 | 3,314.68 | 3,267.54 | 70.324 | CC |
| McKee 12-21 (PA) - Original Drilling - Original Drilling - A | 2,100.00 | 2,117.98 | 3,316.02 | 3,266.71 | 67.247 | ES |
| McKee 12-21 (PA) - Original Drilling - Original Drilling - A | 6,700.00 | 6,527.83 | 4,375.21 | 4,225.20 | 29.166 | SF |
| McKee 21-21 (PA) - Original Drilling - Original Drilling - A | 2,000.00 | 2,034.00 | 5,359.66 | 5,312.21 | 112.950 | CC |
| McKee 21-21 (PA) - Original Drilling - Original Drilling - A | 2,100.00 | 2,133.98 | 5,361.09 | 5,311.46 | 108.024 | ES |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

| 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 Section 21 | | | | | | |
| McKee 21-21 (PA) - Original Drilling - Original Drilling - A | 6,850.00 | 6,653.05 | 6,535.75 | 6,382.82 | 42.737 | SF |
| McKee 22-21 - Original Drilling - Original Drilling - As Dril | 0.00 | 11.92 | 4,343.30 | | | |
| McKee 22-21 - Original Drilling - Original Drilling - As Dril | 1,500.00 | 1,488.09 | 4,350.39 | 4,340.33 | 432.604 | ES |
| McKee 22-21 - Original Drilling - Original Drilling - As Dril | 6,850.00 | 6,617.34 | 5,634.19 | 5,591.40 | 131.662 | SF |
| McKee 31-21 - Original Drilling - Original Drilling - As Dril | 2,036.17 | 2,131.76 | 6,413.11 | 6,398.96 | 453.425 | CC, ES |
| McKee 31-21 - Original Drilling - Original Drilling - As Dril | 7,000.00 | 7,077.99 | 7,664.98 | 7,620.03 | 170.518 | SF |
| McKee 32-21 - Original Drilling - Original Drilling - As Dril | 2,017.87 | 2,051.77 | 5,397.64 | 5,383.72 | 387.622 | CC, ES |
| McKee 32-21 - Original Drilling - Original Drilling - As Dril | 7,050.00 | 6,733.30 | 6,816.40 | 6,772.75 | 156.148 | SF |
| McKee 41-21 - Original Drilling - Original Drilling - As Dril | 0.00 | 0.00 | 7,333.17 | | | |
| McKee 41-21 - Original Drilling - Original Drilling - As Dril | 2,031.25 | 2,109.76 | 7,341.89 | 7,327.82 | 521.798 | ES |
| McKee 41-21 - Original Drilling - Original Drilling - As Dril | 7,000.00 | 6,547.09 | 8,666.82 | 8,624.04 | 202.614 | SF |
| McKee 42-21 - Original Drilling - Original Drilling - As Dril | 2,011.81 | 2,025.54 | 6,590.57 | 6,576.89 | 481.709 | CC, ES |
| McKee 42-21 - Original Drilling - Original Drilling - As Dril | 7,200.00 | 6,816.73 | 8,018.30 | 7,974.06 | 181.233 | SF |
| Rampart A33-730 - Rampart A33-730 - APD-Rev 1 | 1,908.34 | 1,928.34 | 2,476.03 | 2,463.09 | 191.356 | CC |
| Rampart A33-730 - Rampart A33-730 - APD-Rev 1 | 2,000.00 | 2,000.00 | 2,476.11 | 2,462.60 | 183.291 | ES |
| Rampart A33-730 - Rampart A33-730 - APD-Rev 1 | 16,949.50 | 17,720.27 | 6,588.78 | 6,408.31 | 36.509 | SF |
| Rampart A33-740 - Rampart A33-740 - APD-Rev 0 | 1,907.81 | 1,928.81 | 2,453.49 | 2,440.55 | 189.617 | CC |
| Rampart A33-740 - Rampart A33-740 - APD-Rev 0 | 2,000.00 | 2,000.00 | 2,453.58 | 2,440.07 | 181.624 | ES |
| Rampart A33-740 - Rampart A33-740 - APD-Rev 0 | 16,949.50 | 17,515.21 | 5,942.61 | 5,762.53 | 32.999 | SF |
| Rampart A33-750 - Rampart A33-750 - APD-Rev 0 | 1,907.81 | 1,928.81 | 2,431.16 | 2,418.22 | 187.891 | CC |
| Rampart A33-750 - Rampart A33-750 - APD-Rev 0 | 2,000.00 | 2,000.00 | 2,431.25 | 2,417.74 | 179.970 | ES |
| Rampart A33-750 - Rampart A33-750 - APD-Rev 0 | 16,949.50 | 17,093.98 | 5,270.21 | 5,090.65 | 29.350 | SF |
| Rampart A33-760 - Rampart A33-760 - APD-Rev 1 | 1,908.33 | 1,928.33 | 2,408.82 | 2,395.88 | 186.162 | CC |
| Rampart A33-760 - Rampart A33-760 - APD-Rev 1 | 2,000.00 | 2,000.00 | 2,408.90 | 2,395.40 | 178.316 | ES |
| Rampart A33-760 - Rampart A33-760 - APD-Rev 1 | 16,949.50 | 16,956.23 | 4,635.55 | 4,456.17 | 25.842 | SF |
| Rampart A33-770 - Rampart A33-770 - APD-Rev 0 | 1,907.81 | 1,928.81 | 2,386.40 | 2,373.46 | 184.431 | CC |
| Rampart A33-770 - Rampart A33-770 - APD-Rev 0 | 2,000.00 | 2,015.16 | 2,386.43 | 2,372.89 | 176.297 | ES |
| Rampart A33-770 - Rampart A33-770 - APD-Rev 0 | 16,949.50 | 16,811.58 | 3,947.53 | 3,767.89 | 21.974 | SF |
| Sexton 43-21 (PA) - Original Drilling - Original Drilling - A | 2,000.00 | 1,974.00 | 6,217.76 | 6,171.53 | 134.475 | CC |
| Sexton 43-21 (PA) - Original Drilling - Original Drilling - A | 2,100.00 | 2,073.98 | 6,219.51 | 6,171.09 | 128.465 | ES |
| Sexton 43-21 (PA) - Original Drilling - Original Drilling - A | 7,100.00 | 6,717.48 | 7,607.05 | 7,452.20 | 49.125 | SF |
| Wells Trust 13-21 - Original Drilling - Original Drilling - As | 554.19 | 550.21 | 2,435.63 | 2,432.17 | 703.518 | CC |
| Wells Trust 13-21 - Original Drilling - Original Drilling - As | 2,014.24 | 2,021.59 | 2,436.27 | 2,422.59 | 178.114 | ES |
| Wells Trust 13-21 - Original Drilling - Original Drilling - As | 6,750.00 | 6,537.51 | 3,609.45 | 3,567.26 | 85.549 | SF |
| Wells Trust 14-21 - Original Drilling - Original Drilling - As | 1,274.59 | 1,252.61 | 1,866.51 | 1,858.08 | 221.572 | CC |
| Wells Trust 14-21 - Original Drilling - Original Drilling - As | 1,600.00 | 1,568.95 | 1,866.78 | 1,856.11 | 175.059 | ES |
| Wells Trust 14-21 - Original Drilling - Original Drilling - As | 6,900.00 | 6,630.79 | 3,163.27 | 3,120.20 | 73.449 | SF |
| Wells Trust 24-21 - Original Drilling - Original Drilling - As | 2,004.73 | 1,977.24 | 2,748.10 | 2,734.60 | 203.505 | CC, ES |
| Wells Trust 24-21 - Original Drilling - Original Drilling - As | 7,100.00 | 6,661.07 | 4,083.78 | 4,040.15 | 93.599 | SF |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

| 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 Section 28 | | | | | | |
| Ankeney 2-28 (SI) - Wellbore #1 - No Surveys | 2,000.00 | 1,956.00 | 6,609.16 | 6,563.28 | 144.055 | CC |
| Ankeney 2-28 (SI) - Wellbore #1 - No Surveys | 2,100.00 | 2,055.98 | 6,610.55 | 6,562.50 | 137.559 | ES |
| Ankeney 2-28 (SI) - Wellbore #1 - No Surveys | 10,800.00 | 6,737.00 | 7,475.38 | 7,301.80 | 43.065 | SF |
| Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys | 1,264.50 | 1,209.62 | 6,503.07 | 6,494.82 | 788.543 | CC |
| Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys | 1,400.00 | 1,300.00 | 6,503.47 | 6,494.44 | 719.849 | ES |
| Ankeney 28-01 (PA) - Wellbore #1 - Gyro Surveys | 12,700.00 | 6,682.70 | 8,193.86 | 8,124.33 | 117.846 | SF |
| Art Rohr 1 (PA) - Wellbore #1 - No Surveys | 10,167.29 | 6,732.00 | 4,581.40 | 4,410.16 | 26.754 | CC |
| Art Rohr 1 (PA) - Wellbore #1 - No Surveys | 10,200.00 | 6,732.00 | 4,581.52 | 4,410.09 | 26.726 | ES |
| Art Rohr 1 (PA) - Wellbore #1 - No Surveys | 10,800.00 | 6,732.00 | 4,624.88 | 4,450.38 | 26.504 | SF |
| Danley 1 (TA) - Wellbore #1 - Gyro Surveys | 2,014.13 | 1,997.28 | 2,459.13 | 2,445.53 | 180.862 | CC, ES |
| Danley 1 (TA) - Wellbore #1 - Gyro Surveys | 8,000.00 | 6,708.60 | 3,625.85 | 3,579.58 | 78.367 | SF |
| Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys | 1,661.12 | 1,623.14 | 3,145.41 | 3,134.33 | 283.932 | CC |
| Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys | 2,000.00 | 1,955.65 | 3,145.62 | 3,132.20 | 234.327 | ES |
| Danley 12-28 (SI) - Wellbore #1 - Gyro Surveys | 9,700.00 | 6,739.53 | 3,488.07 | 3,433.23 | 63.598 | SF |
| Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys | 10,190.80 | 6,664.98 | 3,345.46 | 3,285.77 | 56.044 | CC |
| Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys | 10,200.00 | 6,665.07 | 3,345.47 | 3,285.73 | 56.001 | ES |
| Danley 13-28 (PR) - Wellbore #1 - Gyro Surveys | 10,800.00 | 6,671.39 | 3,400.47 | 3,338.13 | 54.549 | SF |
| Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys | 11,536.86 | 6,658.11 | 3,324.79 | 3,255.43 | 47.933 | CC, ES |
| Danley 14-28 (PR) - Wellbore #1 - Gyro Surveys | 12,100.00 | 6,675.18 | 3,372.10 | 3,300.17 | 46.878 | SF |
| Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys | 691.13 | 655.13 | 3,564.23 | 3,559.93 | 829.037 | CC |
| Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys | 2,000.00 | 1,950.79 | 3,566.88 | 3,553.49 | 266.265 | ES |
| Dewey 21-28 (TA) - Wellbore #1 - Gyro Surveys | 9,200.00 | 6,618.64 | 4,893.68 | 4,843.21 | 96.970 | SF |
| Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys | 2,019.11 | 1,991.85 | 4,073.86 | 4,060.28 | 299.907 | CC, ES |
| Dewey 22-28 (SI) - Wellbore #1 - Gyro Surveys | 13,600.00 | 13,600.00 | 6,739.50 | 6,649.82 | 75.153 | SF |
| Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys | 11,567.88 | 6,704.84 | 4,621.59 | 4,551.83 | 66.244 | CC |
| Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys | 11,600.00 | 6,704.74 | 4,621.71 | 4,551.75 | 66.067 | ES |
| Hannan Rohr 1 (PA) - Wellbore #1 - Gyro Surveys | 12,700.00 | 6,701.31 | 4,758.24 | 4,682.95 | 63.203 | SF |
| Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys | 10,680.96 | 6,588.99 | 4,130.58 | 4,067.85 | 65.848 | CC |
| Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys | 10,700.00 | 6,589.37 | 4,130.62 | 4,067.78 | 65.738 | ES |
| Rohr A 28-25 (SI) - Wellbore #1 - Gyro Surveys | 11,700.00 | 6,609.89 | 4,254.37 | 4,186.84 | 63.003 | SF |
| Wardlaw 16-28 - Original Drilling - Original Drilling - As D | 11,568.42 | 6,710.00 | 7,074.03 | 6,893.17 | 39.114 | CC |
| Wardlaw 16-28 - Original Drilling - Original Drilling - As D | 11,600.00 | 6,710.00 | 7,074.10 | 6,893.04 | 39.070 | ES |
| Wardlaw 16-28 - Original Drilling - Original Drilling - As D | 13,000.00 | 6,710.00 | 7,217.43 | 7,028.11 | 38.122 | SF |
| Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys | 11,528.66 | 6,669.51 | 7,094.85 | 7,025.42 | 102.190 | CC |
| Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys | 11,600.00 | 6,668.71 | 7,095.21 | 7,025.33 | 101.532 | ES |
| Wardlaw 16-28 (SI) - Wellbore #1 - Gyro Surveys | 14,200.00 | 6,640.26 | 7,581.02 | 7,497.56 | 90.831 | SF |
| Wardlaw 20-28 - Original Drilling - Original Drilling - As D | 10,915.47 | 6,705.00 | 6,763.92 | 6,587.94 | 38.437 | CC, ES |
| Wardlaw 20-28 - Original Drilling - Original Drilling - As D | 12,300.00 | 6,705.00 | 6,904.17 | 6,720.20 | 37.529 | SF |
| Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys | 10,883.19 | 6,665.24 | 6,772.57 | 6,707.89 | 104.698 | CC |
| Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys | 10,900.00 | 6,665.11 | 6,772.59 | 6,707.80 | 104.531 | ES |
| Wardlaw 20-28 (SI) - Wellbore #1 - Gyro Surveys | 13,500.00 | 6,648.85 | 7,260.52 | 7,182.30 | 92.827 | SF |
| Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys | 350.20 | 280.20 | 5,258.21 | 5,256.40 | 2,911.100 | CC |
| Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys | 900.00 | 814.65 | 5,261.25 | 5,255.66 | 940.344 | ES |
| Wardlaw 33-28 (PA) - Wellbore #1 - Gyro Surveys | 16,949.50 | 6,882.74 | 9,029.85 | 8,921.22 | 83.126 | SF |
| Webster 09-28 - Original Drilling - Original Drilling - As D | 2,000.00 | 1,939.00 | 6,864.13 | 6,818.59 | 150.718 | CC |
| Webster 09-28 - Original Drilling - Original Drilling - As D | 2,100.00 | 2,038.98 | 6,865.36 | 6,817.64 | 143.868 | ES |
| Webster 09-28 - Original Drilling - Original Drilling - As D | 11,600.00 | 6,720.00 | 7,208.59 | 7,029.50 | 40.252 | SF |
| Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys | 11,451.13 | 6,658.22 | 5,757.71 | 5,688.91 | 83.693 | CC |
| Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys | 11,500.00 | 6,658.20 | 5,757.92 | 5,688.82 | 83.331 | ES |
| Webster 15-28 (SI) - Wellbore #1 - Gyro Surveys | 13,300.00 | 6,657.65 | 6,047.27 | 5,969.09 | 77.348 | SF |
| Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys | 1,032.13 | 971.16 | 6,860.06 | 6,853.46 | 1,039.273 | CC |
| Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys | 2,035.72 | 2,034.94 | 6,861.08 | 6,847.32 | 498.742 | ES |
| Webster 9-28 (PR) - Wellbore #1 - Gyro Surveys | 13,200.00 | 6,669.74 | 7,728.38 | 7,653.42 | 103.111 | SF |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.
Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

| 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 Section 29 | | | | | | |
| Amos 1 (DA) - Wellbore #1 - No Surveys | 10,196.21 | 3,800.00 | 3,348.08 | 3,273.85 | 45.102 | CC |
| Amos 1 (DA) - Wellbore #1 - No Surveys | 10,200.00 | 3,800.00 | 3,348.09 | 3,273.82 | 45.085 | ES |
| Amos 1 (DA) - Wellbore #1 - No Surveys | 11,900.00 | 3,800.00 | 3,756.67 | 3,662.88 | 40.056 | SF |
| Anderson 3-29 (SI) - Wellbore #1 - Gyro Surveys | 7,362.86 | 6,735.52 | 686.64 | 642.50 | 15.557 | CC, ES |
| Anderson 3-29 (SI) - Wellbore #1 - Gyro Surveys | 7,400.00 | 6,735.50 | 687.64 | 643.28 | 15.502 | SF |
| Andy 29-1 (PA) - Wellbore #1 - No Surveys | 8,906.36 | 6,729.00 | 610.14 | 447.01 | 3.740 | CC, ES, SF |
| Andy 29-2 (PA) - Wellbore #1 - Gyro Surveys | 8,722.40 | 6,739.50 | 1,889.40 | 1,838.83 | 37.359 | CC, ES |
| Andy 29-2 (PA) - Wellbore #1 - Gyro Surveys | 9,200.00 | 6,737.25 | 1,948.83 | 1,894.60 | 35.939 | SF |
| Capehart 1 (SI) - Wellbore #1 - Gyro Surveys | 8,861.58 | 6,716.43 | 584.14 | 532.62 | 11.338 | CC, ES, SF |
| Capehart 31-29 (TA) - Wellbore #1 - Gyro Surveys | 7,512.17 | 6,732.38 | 894.76 | 849.35 | 19.703 | CC, ES, SF |
| Capehart 41-29 (TA) - Wellbore #1 - Gyro Surveys | 174.92 | 131.92 | 1,375.67 | 1,375.00 | 2,050.572 | CC |
| Capehart 41-29 (TA) - Wellbore #1 - Gyro Surveys | 1,000.00 | 946.81 | 1,377.64 | 1,371.23 | 215.026 | ES |
| Capehart 41-29 (TA) - Wellbore #1 - Gyro Surveys | 7,800.00 | 6,714.51 | 2,187.95 | 2,141.96 | 47.567 | SF |
| Capehart 42-29 (SI) - Wellbore #1 - Gyro Surveys | 8,962.99 | 6,727.66 | 896.02 | 843.81 | 17.162 | CC, ES |
| Capehart 42-29 (SI) - Wellbore #1 - Gyro Surveys | 9,100.00 | 6,727.00 | 906.44 | 852.77 | 16.891 | SF |
| Miller 15-29 (PR) - Wellbore #1 - Gyro Surveys | 11,258.56 | 6,635.54 | 697.20 | 630.83 | 10.505 | CC, ES, SF |
| Miller 16-29 (SI) - Wellbore #1 - Gyro Surveys | 11,492.90 | 6,740.73 | 2,225.64 | 2,156.05 | 31.983 | CC |
| Miller 16-29 (SI) - Wellbore #1 - Gyro Surveys | 11,500.00 | 6,740.98 | 2,225.65 | 2,156.03 | 31.969 | ES |
| Miller 16-29 (SI) - Wellbore #1 - Gyro Surveys | 11,700.00 | 6,747.98 | 2,235.24 | 2,164.86 | 31.760 | SF |
| Miller 33-29 (SI) - Wellbore #1 - Gyro Surveys | 10,260.38 | 6,708.18 | 658.59 | 598.14 | 10.894 | CC, ES, SF |
| Miller 43-29 (SI) - Wellbore #1 - Gyro Surveys | 10,338.94 | 6,632.24 | 2,039.15 | 1,978.73 | 33.751 | CC, ES |
| Miller 43-29 (SI) - Wellbore #1 - Gyro Surveys | 10,500.00 | 6,633.88 | 2,045.50 | 1,984.55 | 33.559 | SF |
| Rhine 15-29 (PR) - Wellbore #1 - Gyro Surveys | 11,274.38 | 6,731.26 | 633.31 | 565.11 | 9.287 | CC, ES, SF |
| Uhrich 1 (SI) - Wellbore #1 - Gyro Surveys | 11,429.45 | 6,719.46 | 1,993.14 | 1,924.22 | 28.919 | CC, ES |
| Uhrich 1 (SI) - Wellbore #1 - Gyro Surveys | 11,800.00 | 6,715.81 | 2,027.29 | 1,954.98 | 28.037 | SF |
| Uhrich 13-29 (PR) - Wellbore #1 - Gyro Surveys | 10,175.49 | 6,727.40 | 2,065.59 | 2,005.61 | 34.442 | CC |
| Uhrich 13-29 (PR) - Wellbore #1 - Gyro Surveys | 10,200.00 | 6,727.50 | 2,065.73 | 2,005.52 | 34.306 | ES |
| Uhrich 13-29 (PR) - Wellbore #1 - Gyro Surveys | 10,700.00 | 6,729.59 | 2,131.14 | 2,066.78 | 33.112 | SF |
| Uhrich 14-29 (SI) - Wellbore #1 - Gyro Surveys | 11,605.69 | 6,690.36 | 497.84 | 427.35 | 7.062 | CC, ES |
| Uhrich 14-29 (SI) - Wellbore #1 - Gyro Surveys | 11,700.00 | 6,685.86 | 506.67 | 434.85 | 7.055 | SF |
| Uhrich 19-29 (SI) - Wellbore #1 - Gyro Surveys | 10,954.18 | 6,717.29 | 1,134.05 | 1,068.61 | 17.329 | CC, ES |
| Uhrich 19-29 (SI) - Wellbore #1 - Gyro Surveys | 11,100.00 | 6,715.23 | 1,143.39 | 1,076.29 | 17.040 | SF |
| Uhrich 23-29 (SI) - Wellbore #1 - Gyro Surveys | 10,502.60 | 6,712.21 | 444.45 | 382.22 | 7.142 | CC, ES, SF |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

| 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 Section 32 | | | | | | |
| Ehrlich 13-32 (PR) - Wellbore #1 - Gyro Surveys | 15,330.64 | 6,758.22 | 2,022.52 | 1,923.55 | 20.435 | CC, ES |
| Ehrlich 13-32 (PR) - Wellbore #1 - Gyro Surveys | 15,600.00 | 6,778.21 | 2,040.27 | 1,938.78 | 20.103 | SF |
| Ehrlich 14-32 (TA) - Wellbore #1 - Gyro Surveys | 16,722.20 | 6,727.27 | 1,917.21 | 1,807.13 | 17.417 | CC, ES |
| Ehrlich 14-32 (TA) - Wellbore #1 - Gyro Surveys | 16,949.50 | 6,718.36 | 1,930.62 | 1,818.37 | 17.199 | SF |
| Farmland 10-32 (SI) - Wellbore #1 - Gyro Surveys | 15,545.69 | 6,681.24 | 648.72 | 548.08 | 6.446 | CC, ES, SF |
| Farmland 16-32 (SI) - Wellbore #1 - Gyro Surveys | 16,774.08 | 6,731.69 | 2,018.18 | 1,907.63 | 18.256 | CC, ES |
| Farmland 16-32 (SI) - Wellbore #1 - Gyro Surveys | 16,900.00 | 6,731.29 | 2,022.11 | 1,911.17 | 18.228 | SF |
| Hoffner 1 (PR) - Wellbore #1 - Gyro Surveys | 12,800.00 | 6,701.59 | 671.96 | 592.62 | 8.470 | SF |
| Hoffner 1 (PR) - Wellbore #1 - Gyro Surveys | 12,805.24 | 6,701.50 | 671.94 | 592.61 | 8.471 | CC, ES |
| Hoffner 32-32 (SI) - Wellbore #1 - Gyro Surveys | 14,140.60 | 6,677.49 | 657.46 | 567.94 | 7.344 | CC, ES, SF |
| Johnson 5-32 (PR) - Wellbore #1 - Gyro Surveys | 14,431.64 | 6,743.28 | 1,715.81 | 1,623.97 | 18.684 | CC, ES |
| Johnson 5-32 (PR) - Wellbore #1 - Gyro Surveys | 14,700.00 | 6,747.73 | 1,736.66 | 1,642.30 | 18.404 | SF |
| Johnson A 32-06 (PR) - Wellbore #1 - Gyro Surveys | 14,302.13 | 6,701.40 | 472.70 | 381.87 | 5.204 | CC, ES, SF |
| Larsen 1 (PR) - Wellbore #1 - Gyro Surveys | 12,849.32 | 6,698.59 | 1,967.23 | 1,887.64 | 24.717 | CC, ES |
| Larsen 1 (PR) - Wellbore #1 - Gyro Surveys | 13,000.00 | 6,698.43 | 1,972.99 | 1,892.93 | 24.645 | SF |
| Larsen 2 (PR) - Wellbore #1 - Gyro Surveys | 14,070.62 | 6,689.07 | 1,954.41 | 1,865.33 | 21.941 | CC, ES |
| Larsen 2 (PR) - Wellbore #1 - Gyro Surveys | 14,200.00 | 6,688.61 | 1,958.69 | 1,869.22 | 21.892 | SF |
| Larson A32-17 (PR) - Wellbore #1 - MWD Surveys | 13,378.76 | 6,691.57 | 1,547.62 | 1,464.24 | 18.560 | CC, ES |
| Larson A32-17 (PR) - Wellbore #1 - MWD Surveys | 13,400.00 | 6,691.00 | 1,547.77 | 1,464.33 | 18.550 | SF |
| QC USX A32-19 (PR) - Wellbore #1 - MWD Surveys | 13,406.78 | 6,704.62 | 1,031.81 | 947.80 | 12.283 | CC, ES |
| QC USX A32-19 (PR) - Wellbore #1 - MWD Surveys | 13,500.00 | 6,706.00 | 1,036.01 | 950.83 | 12.163 | SF |
| Rubix A 32-03 (PR) - Wellbore #1 - Gyro Surveys | 12,609.63 | 6,706.03 | 549.14 | 471.28 | 7.052 | CC, ES |
| Rubix A 32-03 (PR) - Wellbore #1 - Gyro Surveys | 12,700.00 | 6,707.03 | 556.53 | 477.44 | 7.036 | SF |
| Rubix A 32-04 (SI) - Wellbore #1 - No Surveys | 12,616.54 | 6,710.00 | 1,883.70 | 1,694.93 | 9.979 | CC, ES |
| Rubix A 32-04 (SI) - Wellbore #1 - No Surveys | 12,800.00 | 6,710.00 | 1,892.61 | 1,701.96 | 9.927 | SF |
| Webster 11-32 (PR) - Wellbore #1 - Gyro Surveys | 15,324.74 | 6,687.40 | 421.38 | 322.52 | 4.262 | CC, ES, SF |
| Webster 14-32 (TA) - Wellbore #1 - Gyro Surveys | 16,949.50 | 6,665.24 | 647.70 | 538.14 | 5.912 | CC, ES, SF |
| Webster 15-32 (PR) - Wellbore #1 - Gyro Surveys | 16,712.54 | 6,679.01 | 760.08 | 650.03 | 6.907 | CC, ES, SF |
| Webster 9-32 (SI) - Wellbore #1 - Gyro Surveys | 15,373.83 | 6,709.57 | 1,977.82 | 1,878.26 | 19.866 | CC, ES |
| Webster 9-32 (SI) - Wellbore #1 - Gyro Surveys | 15,500.00 | 6,710.86 | 1,981.84 | 1,881.89 | 19.827 | SF |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.

Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

| 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 Section 33 | | | | | | |
| Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys | 15,307.33 | 6,642.43 | 4,825.17 | 4,726.52 | 48.912 | CC, ES |
| Achziger 11-33 (PR) - Wellbore #1 - Gyro Surveys | 16,200.00 | 6,650.23 | 4,907.05 | 4,803.87 | 47.559 | SF |
| Achziger 14-33 (PA) - Wellbore #1 - No Surveys | 16,921.46 | 6,670.00 | 4,586.86 | 4,364.91 | 20.667 | CC |
| Achziger 14-33 (PA) - Wellbore #1 - No Surveys | 16,949.50 | 6,670.00 | 4,586.94 | 4,364.82 | 20.651 | ES, SF |
| Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys | 16,720.74 | 6,469.40 | 5,893.56 | 5,784.55 | 54.062 | CC, ES |
| Briggs 15-33 (SI) - Wellbore #1 - Gyro Surveys | 16,949.50 | 6,469.27 | 5,898.00 | 5,787.51 | 53.381 | SF |
| Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey | 16,138.42 | 6,674.11 | 3,800.06 | 3,694.64 | 36.048 | CC, ES |
| Ehrlich 19-33 (PR) - Wellbore #1 - Gyro Survey | 16,600.00 | 6,676.11 | 3,827.99 | 3,720.35 | 35.563 | SF |
| French 09-33 - Original Drilling - Original Drilling - As Dril | 15,399.68 | 6,806.62 | 7,260.56 | 7,160.44 | 72.519 | CC |
| French 09-33 - Original Drilling - Original Drilling - As Dril | 15,400.00 | 6,806.62 | 7,260.56 | 7,160.43 | 72.517 | ES |
| French 09-33 - Original Drilling - Original Drilling - As Dril | 16,949.50 | 6,783.88 | 7,424.09 | 7,315.04 | 68.081 | SF |
| Hammerbeck 16-33 - Original Drilling - Original Drilling - | 16,816.90 | 6,845.44 | 7,314.40 | 7,202.78 | 65.527 | CC |
| Hammerbeck 16-33 - Original Drilling - Original Drilling - | 16,900.00 | 6,845.96 | 7,314.87 | 7,202.67 | 65.193 | ES |
| Hammerbeck 16-33 - Original Drilling - Original Drilling - | 16,949.50 | 6,846.26 | 7,315.60 | 7,203.06 | 65.003 | SF |
| Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys | 16,087.62 | 6,803.28 | 6,553.65 | 6,448.21 | 62.155 | CC |
| Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys | 16,100.00 | 6,803.13 | 6,553.66 | 6,448.14 | 62.106 | ES |
| Hammerbeck 20-33 - Wellbore #1 - Gyro Surveys | 16,949.50 | 6,792.76 | 6,610.07 | 6,499.44 | 59.747 | SF |
| Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys | 12,641.78 | 6,707.91 | 3,191.84 | 3,113.79 | 40.897 | CC, ES |
| Noffsinger 11-33 (PR) - Wellbore #1 - Gyro Surveys | 13,100.00 | 6,710.48 | 3,224.56 | 3,144.50 | 40.277 | SF |
| Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys | 14,373.48 | 6,675.63 | 3,376.98 | 3,285.61 | 36.959 | CC |
| Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys | 14,400.00 | 6,675.56 | 3,377.09 | 3,285.57 | 36.901 | ES |
| Noffsinger 12-33 (PR) - Wellbore #1 - Gyro Surveys | 14,800.00 | 6,674.58 | 3,403.81 | 3,310.53 | 36.488 | SF |
| Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys | 12,620.93 | 6,710.00 | 4,617.67 | 4,429.11 | 24.489 | CC, ES |
| Noffsinger 21-33 (PA) - Wellbore #1 - No Surveys | 13,200.00 | 6,710.00 | 4,653.84 | 4,462.11 | 24.274 | SF |
| Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys | 12,598.17 | 6,369.87 | 6,158.76 | 6,082.17 | 80.416 | CC |
| Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys | 12,600.00 | 6,369.81 | 6,158.76 | 6,082.16 | 80.404 | ES |
| Noffsinger 22-33 (PR) - Wellbore #1 - Gyro Surveys | 14,400.00 | 6,310.29 | 6,416.60 | 6,330.81 | 74.793 | SF |
| Noffsinger 31-33 (PR) - Wellbore #1 - Gyro Surveys | | | | | | Out of range |
| Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys | 14,395.03 | 6,400.00 | 5,805.69 | 5,715.53 | 64.395 | CC |
| Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys | 14,400.00 | 6,400.00 | 5,805.69 | 5,715.50 | 64.371 | ES |
| Noffsinger 32-33 (PR) - Wellbore #1 - Gyro Surveys | 15,800.00 | 6,431.83 | 5,973.14 | 5,875.47 | 61.158 | SF |
| Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys | 15,455.62 | 6,659.90 | 3,238.09 | 3,138.21 | 32.418 | CC, ES |
| Sitzman 12-33 (PR) - Wellbore #1 - Gyro Surveys | 15,800.00 | 6,658.81 | 3,256.35 | 3,154.94 | 32.110 | SF |
| Sitzman 13-33 (SI) - Wellbore #1 - Gyro Surveys | 16,949.50 | 6,671.21 | 3,237.87 | 3,125.84 | 28.902 | CC, ES, SF |
| Sughrue 41-33 - Original Drilling - Original Drilling - As I | 12,626.44 | 7,021.00 | 7,316.68 | 7,237.31 | 92.180 | CC |
| Sughrue 41-33 - Original Drilling - Original Drilling - As I | 12,700.00 | 7,021.00 | 7,317.05 | 7,237.19 | 91.618 | ES |
| Sughrue 41-33 - Original Drilling - Original Drilling - As I | 15,100.00 | 6,982.86 | 7,723.40 | 7,630.68 | 83.296 | SF |
| Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys | 15,366.75 | 6,510.68 | 5,957.41 | 5,859.05 | 60.569 | CC |
| Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys | 15,400.00 | 6,510.29 | 5,957.50 | 5,858.92 | 60.435 | ES |
| Webster 10-33 (PA) - Wellbore #1 - Gyro Surveys | 16,700.00 | 6,494.73 | 6,104.75 | 5,999.39 | 57.940 | SF |

CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

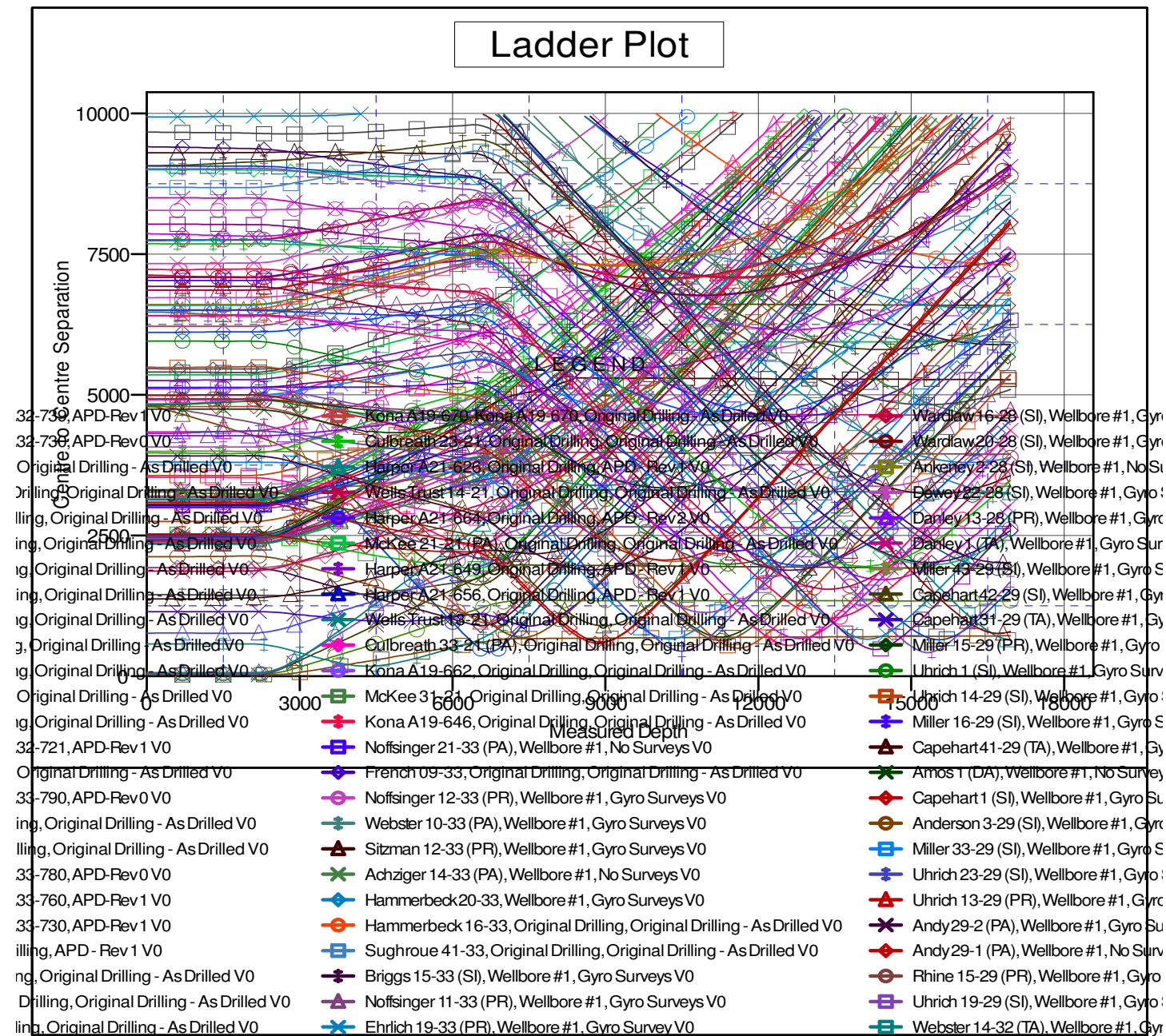
Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

Coordinates are relative to: Rampart A32-751

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.60°

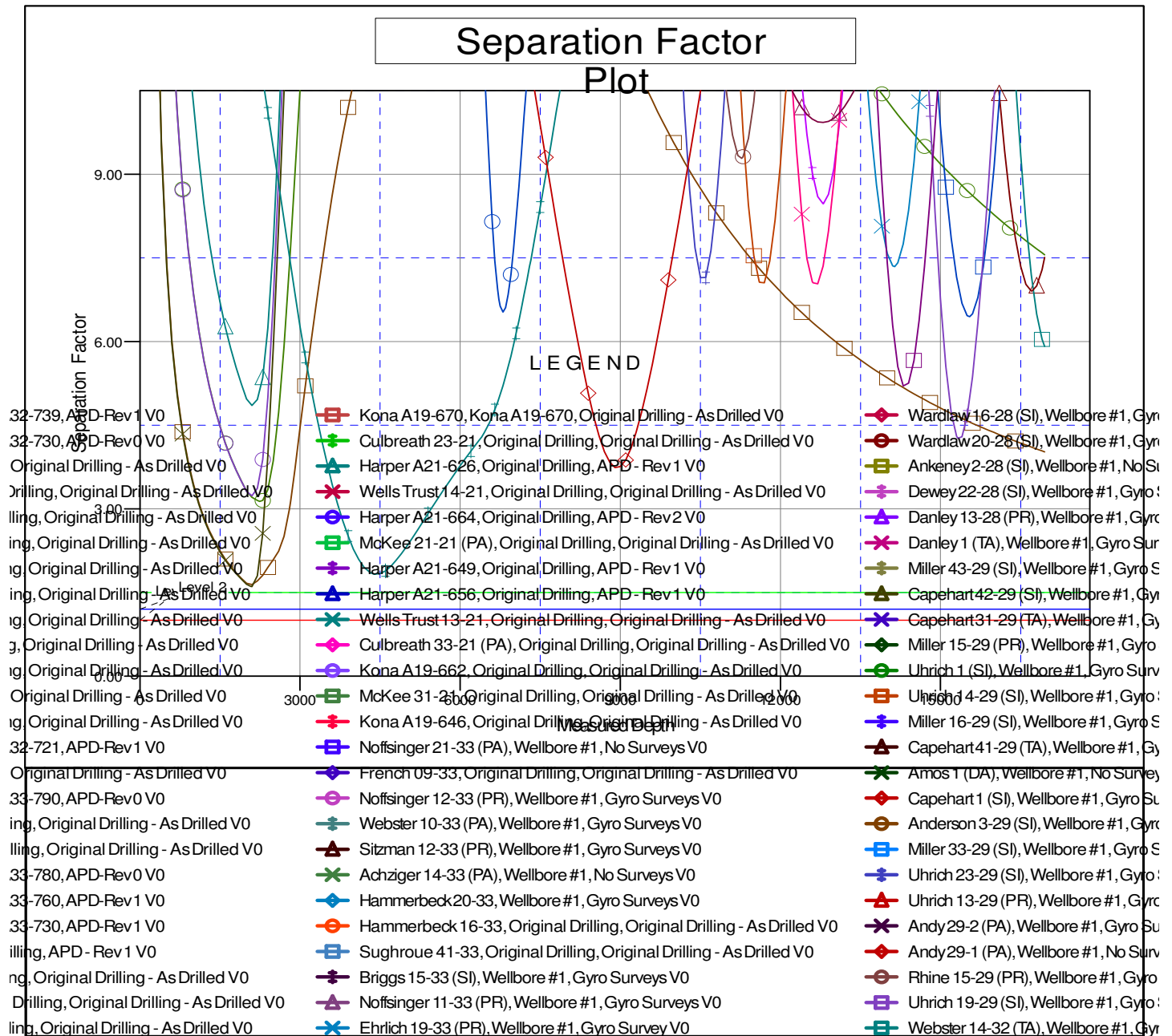


Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|----------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Rampart A32-751 |
| Project: | Wells Ranch | TVD Reference: | KB @ 4736.00ft |
| Reference Site: | A Section 20 | MD Reference: | KB @ 4736.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Rampart A32-751 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Rampart A32-751 | Database: | EDMP |
| Reference Design: | APD-Rev 0 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to KB @ 4736.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Rampart A32-751
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.60°



CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation