

Project: Wells Ranch
 Site: AE Section 32
 Well: Wells Ranch State AA36-673
 Wellbore: Wells Ranch State AA36-673
 Design: Plan 1

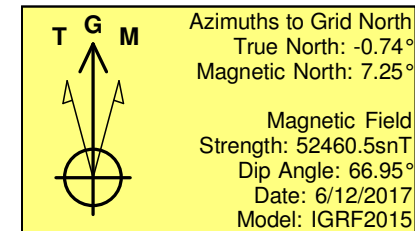
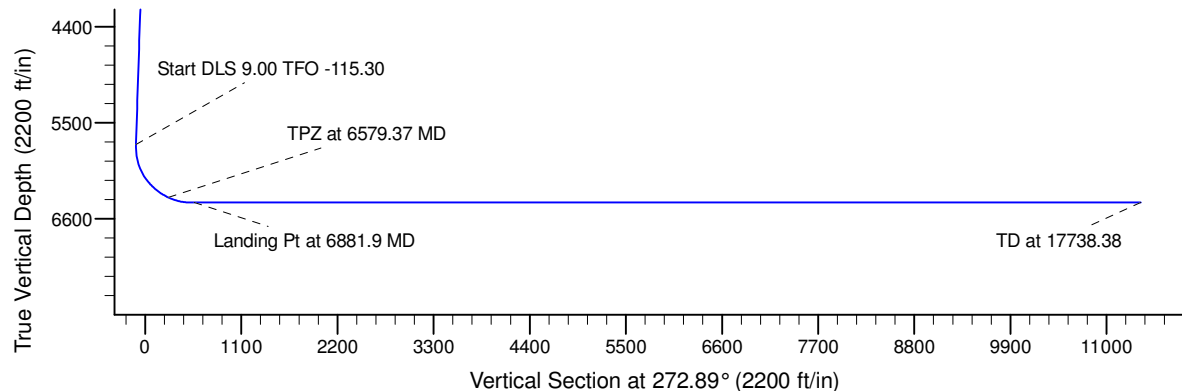
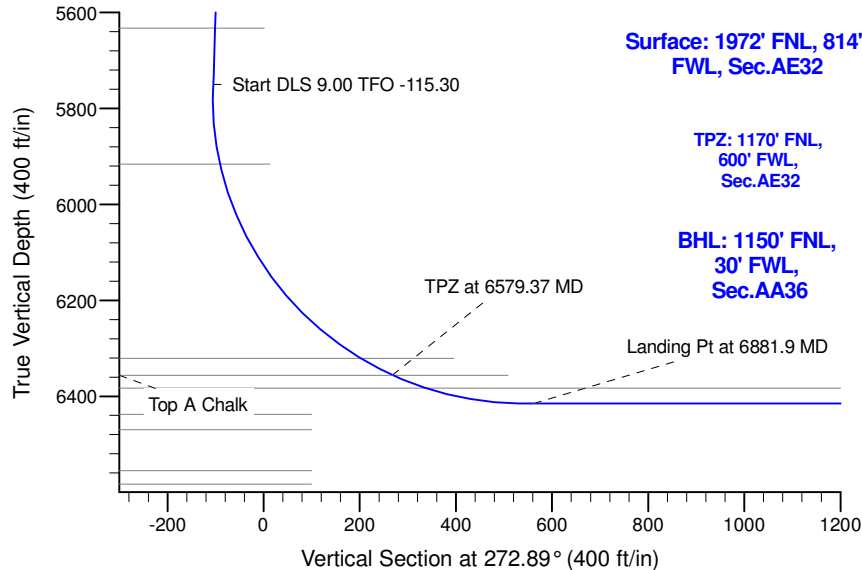
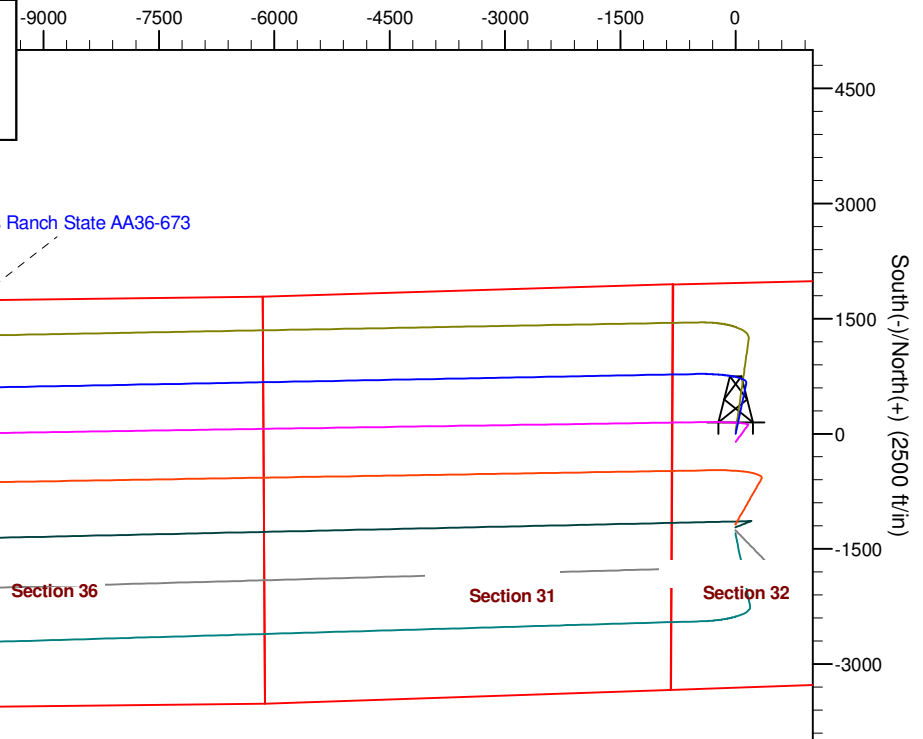
Northern Region - DJ Basin

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 | Target |
|-----|----------|-------|--------|---------|--------|-----------|------|---------|----------|--------------------------------|
| 1 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 2 | 2200.00 | 0.00 | 0.00 | 2200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 2783.28 | 11.67 | 11.82 | 2779.26 | 57.92 | 12.13 | 2.00 | 11.82 | -9.19 | |
| 4 | 5829.64 | 11.67 | 11.82 | 5762.69 | 660.82 | 138.35 | 0.00 | 0.00 | -104.91 | |
| 5 | 6858.41 | 90.00 | 268.91 | 6415.00 | 780.00 | -500.00 | 9.00 | -102.65 | 538.63 | |
| 6 | 17738.38 | 90.00 | 268.91 | 6415.00 | 573.46 | -11378.01 | 0.00 | 0.00 | 11392.45 | Wells Ranch State AA36-673 BHL |

West(-)/East(+) (2500 ft/in)



WELL DETAILS: Wells Ranch State AA36-673

| 0.00 | North | East | 4731.00 | Latitude | Longitude |
|------|------------|------------|------------|--------------|-----------|
| 0.00 | 1407024.25 | 3319027.05 | 40.4450231 | -104.3537304 | |

Plan: Plan 1 (Wells Ranch State AA36-673/Wells Ranch State AA36-673)

Created By: Colby Baxter Date: 10:41, January 08 2018

Checked: _____ Date: _____

Reviewed: _____ Date: _____

Approved: _____ Date: _____

Northern Region - DJ Basin

Wells Ranch

AE Section 32

Wells Ranch State AA36-673

Wells Ranch State AA36-673

Plan: Plan 1

Standard Survey Report

08 January, 2018

Noble Energy, Inc.

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Well: | Wells Ranch State AA36-673 | North Reference: | Grid |
| Wellbore: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan 1 | Database: | EDMP |

| | | | |
|--------------------|-----------------------------------|----------------------|----------------|
| 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 | AE Section 32 | | | | |
| Site Position: | | Northing: | 1,404,332.08 usft | Latitude: | 40.4376400 |
| From: | Map | Easting: | 3,318,849.41 usft | Longitude: | -104.3544935 |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 13.200 in | Grid Convergence: | 0.74 ° |

| Well | Wells Ranch State AA36-673, NEI | | | | | |
|----------------------|---------------------------------|---------|---------------------|-------------------|---------------|--------------|
| Well Position | +N/-S | 0.00 ft | Northing: | 1,407,024.25 usft | Latitude: | 40.4450231 |
| | +E/-W | 0.00 ft | Easting: | 3,319,027.05 usft | Longitude: | -104.3537304 |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | ft | Ground Level: | 4,731.00 ft |

| | | | | | |
|------------------|----------------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wells Ranch State AA36-673 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2015 | 6/12/2017 | 8.00 | 66.95 | 52,460.46905156 |

| | | | | | |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|--|
| Design | Plan 1 | | | | |
| 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 | 272.89 | |

| | | | | | |
|----------------------------|----------------|-------------------------------------|------------------|--|--|
| Survey Tool Program | Date | 1/8/2018 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 0.00 | 17,738.38 | Plan 1 (Wells Ranch State AA36-673) | 2_MWD+IFR1+MS | A008Mb: IFR dec & multi-station analysis | |

| | | | | | | | | | | |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|------------------------------|-----------------------------|----------------------------|--|
| 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 | |
| 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 | |

Noble Energy, Inc.

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Well: | Wells Ranch State AA36-673 | North Reference: | Grid |
| Wellbore: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan 1 | Database: | EDMP |

| 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) |
| 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 |
| 1,600.00 | 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 |
| 2,100.00 | 0.00 | 0.00 | 2,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 0.00 | 0.00 | 2,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 2.00 | 11.82 | 2,299.98 | 1.71 | 0.36 | -0.27 | 2.00 | 2.00 | 0.00 |
| 2,400.00 | 4.00 | 11.82 | 2,399.84 | 6.83 | 1.43 | -1.08 | 2.00 | 2.00 | 0.00 |
| 2,500.00 | 6.00 | 11.82 | 2,499.45 | 15.36 | 3.22 | -2.44 | 2.00 | 2.00 | 0.00 |
| 2,600.00 | 8.00 | 11.82 | 2,598.70 | 27.29 | 5.71 | -4.33 | 2.00 | 2.00 | 0.00 |
| 2,700.00 | 10.00 | 11.82 | 2,697.47 | 42.60 | 8.92 | -6.76 | 2.00 | 2.00 | 0.00 |
| 2,783.28 | 11.67 | 11.82 | 2,779.26 | 57.92 | 12.13 | -9.19 | 2.00 | 2.00 | 0.00 |
| 2,800.00 | 11.67 | 11.82 | 2,795.63 | 61.23 | 12.82 | -9.72 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 11.67 | 11.82 | 2,893.57 | 81.02 | 16.96 | -12.86 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 11.67 | 11.82 | 2,991.50 | 100.81 | 21.10 | -16.00 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 11.67 | 11.82 | 3,089.44 | 120.60 | 25.25 | -19.15 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 11.67 | 11.82 | 3,187.37 | 140.39 | 29.39 | -22.29 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 11.67 | 11.82 | 3,285.31 | 160.18 | 33.54 | -25.43 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 11.67 | 11.82 | 3,383.24 | 179.97 | 37.68 | -28.57 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 11.67 | 11.82 | 3,481.17 | 199.76 | 41.82 | -31.71 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 11.67 | 11.82 | 3,579.11 | 219.56 | 45.97 | -34.86 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 11.67 | 11.82 | 3,677.04 | 239.35 | 50.11 | -38.00 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 11.67 | 11.82 | 3,774.98 | 259.14 | 54.25 | -41.14 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 11.67 | 11.82 | 3,872.91 | 278.93 | 58.40 | -44.28 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 11.67 | 11.82 | 3,970.85 | 298.72 | 62.54 | -47.42 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 11.67 | 11.82 | 4,068.78 | 318.51 | 66.68 | -50.56 | 0.00 | 0.00 | 0.00 |
| 4,200.00 | 11.67 | 11.82 | 4,166.71 | 338.30 | 70.83 | -53.71 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 11.67 | 11.82 | 4,264.65 | 358.09 | 74.97 | -56.85 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 11.67 | 11.82 | 4,362.58 | 377.88 | 79.11 | -59.99 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 11.67 | 11.82 | 4,460.52 | 397.67 | 83.26 | -63.13 | 0.00 | 0.00 | 0.00 |
| 4,600.00 | 11.67 | 11.82 | 4,558.45 | 417.47 | 87.40 | -66.27 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 11.67 | 11.82 | 4,656.39 | 437.26 | 91.54 | -69.42 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 11.67 | 11.82 | 4,754.32 | 457.05 | 95.69 | -72.56 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 11.67 | 11.82 | 4,852.26 | 476.84 | 99.83 | -75.70 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 11.67 | 11.82 | 4,950.19 | 496.63 | 103.97 | -78.84 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 11.67 | 11.82 | 5,048.12 | 516.42 | 108.12 | -81.98 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 11.67 | 11.82 | 5,146.06 | 536.21 | 112.26 | -85.13 | 0.00 | 0.00 | 0.00 |

Noble Energy, Inc.

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Well: | Wells Ranch State AA36-673 | North Reference: | Grid |
| Wellbore: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan 1 | Database: | EDMP |

| 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) |
| 5,300.00 | 11.67 | 11.82 | 5,243.99 | 556.00 | 116.40 | -88.27 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 11.67 | 11.82 | 5,341.93 | 575.79 | 120.55 | -91.41 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 11.67 | 11.82 | 5,439.86 | 595.58 | 124.69 | -94.55 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 11.67 | 11.82 | 5,537.80 | 615.38 | 128.83 | -97.69 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 11.67 | 11.82 | 5,635.73 | 635.17 | 132.98 | -100.84 | 0.00 | 0.00 | 0.00 |
| 5,800.00 | 11.67 | 11.82 | 5,733.67 | 654.96 | 137.12 | -103.98 | 0.00 | 0.00 | 0.00 |
| 5,829.64 | 11.67 | 11.82 | 5,762.69 | 660.82 | 138.35 | -104.91 | 0.00 | 0.00 | 0.00 |
| 5,900.00 | 11.97 | 340.57 | 5,831.63 | 674.68 | 137.38 | -103.24 | 9.00 | 0.43 | -44.42 |
| 6,000.00 | 17.02 | 310.01 | 5,928.55 | 693.91 | 122.69 | -87.60 | 9.00 | 5.05 | -30.55 |
| 6,100.00 | 24.41 | 295.23 | 6,022.09 | 712.17 | 92.72 | -56.76 | 9.00 | 7.39 | -14.78 |
| 6,200.00 | 32.59 | 287.26 | 6,109.93 | 729.00 | 48.22 | -11.47 | 9.00 | 8.17 | -7.97 |
| 6,300.00 | 41.08 | 282.26 | 6,189.91 | 744.00 | -9.72 | 47.15 | 9.00 | 8.49 | -5.00 |
| 6,400.00 | 49.72 | 278.73 | 6,260.07 | 756.80 | -79.67 | 117.66 | 9.00 | 8.64 | -3.53 |
| 6,500.00 | 58.45 | 276.01 | 6,318.68 | 767.07 | -159.91 | 198.32 | 9.00 | 8.73 | -2.72 |
| 6,600.00 | 67.23 | 273.76 | 6,364.29 | 774.57 | -248.47 | 287.15 | 9.00 | 8.78 | -2.25 |
| 6,700.00 | 76.03 | 271.78 | 6,395.78 | 779.11 | -343.17 | 381.95 | 9.00 | 8.80 | -1.98 |
| 6,800.00 | 84.85 | 269.95 | 6,412.37 | 780.58 | -441.67 | 480.40 | 9.00 | 8.82 | -1.83 |
| 6,858.42 | 90.00 | 268.91 | 6,415.00 | 780.00 | -500.00 | 538.63 | 9.00 | 8.82 | -1.78 |
| 6,900.00 | 90.00 | 268.91 | 6,415.00 | 779.21 | -541.58 | 580.11 | 0.00 | 0.00 | 0.00 |
| 7,000.00 | 90.00 | 268.91 | 6,415.00 | 777.31 | -641.56 | 679.87 | 0.00 | 0.00 | 0.00 |
| 7,100.00 | 90.00 | 268.91 | 6,415.00 | 775.41 | -741.54 | 779.63 | 0.00 | 0.00 | 0.00 |
| 7,200.00 | 90.00 | 268.91 | 6,415.00 | 773.52 | -841.52 | 879.39 | 0.00 | 0.00 | 0.00 |
| 7,300.00 | 90.00 | 268.91 | 6,415.00 | 771.62 | -941.51 | 979.15 | 0.00 | 0.00 | 0.00 |
| 7,400.00 | 90.00 | 268.91 | 6,415.00 | 769.72 | -1,041.49 | 1,078.91 | 0.00 | 0.00 | 0.00 |
| 7,500.00 | 90.00 | 268.91 | 6,415.00 | 767.82 | -1,141.47 | 1,178.67 | 0.00 | 0.00 | 0.00 |
| 7,600.00 | 90.00 | 268.91 | 6,415.00 | 765.92 | -1,241.45 | 1,278.43 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 90.00 | 268.91 | 6,415.00 | 764.02 | -1,341.43 | 1,378.19 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.00 | 268.91 | 6,415.00 | 762.13 | -1,441.42 | 1,477.95 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.00 | 268.91 | 6,415.00 | 760.23 | -1,541.40 | 1,577.71 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.00 | 268.91 | 6,415.00 | 758.33 | -1,641.38 | 1,677.47 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.00 | 268.91 | 6,415.00 | 756.43 | -1,741.36 | 1,777.23 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 268.91 | 6,415.00 | 754.53 | -1,841.34 | 1,876.99 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.00 | 268.91 | 6,415.00 | 752.63 | -1,941.33 | 1,976.75 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 268.91 | 6,415.00 | 750.73 | -2,041.31 | 2,076.51 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.00 | 268.91 | 6,415.00 | 748.84 | -2,141.29 | 2,176.27 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 268.91 | 6,415.00 | 746.94 | -2,241.27 | 2,276.03 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 268.91 | 6,415.00 | 745.04 | -2,341.25 | 2,375.79 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 268.91 | 6,415.00 | 743.14 | -2,441.24 | 2,475.55 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 268.91 | 6,415.00 | 741.24 | -2,541.22 | 2,575.31 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.00 | 268.91 | 6,415.00 | 739.34 | -2,641.20 | 2,675.07 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 268.91 | 6,415.00 | 737.45 | -2,741.18 | 2,774.83 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 268.91 | 6,415.00 | 735.55 | -2,841.16 | 2,874.59 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 268.91 | 6,415.00 | 733.65 | -2,941.15 | 2,974.35 | 0.00 | 0.00 | 0.00 |

Noble Energy, Inc.

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Well: | Wells Ranch State AA36-673 | North Reference: | Grid |
| Wellbore: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan 1 | Database: | EDMP |

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) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 9,400.00 | 90.00 | 268.91 | 6,415.00 | 731.75 | -3,041.13 | 3,074.11 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 268.91 | 6,415.00 | 729.85 | -3,141.11 | 3,173.87 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 268.91 | 6,415.00 | 727.95 | -3,241.09 | 3,273.63 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 268.91 | 6,415.00 | 726.06 | -3,341.07 | 3,373.38 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 268.91 | 6,415.00 | 724.16 | -3,441.06 | 3,473.14 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 268.91 | 6,415.00 | 722.26 | -3,541.04 | 3,572.90 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 268.91 | 6,415.00 | 720.36 | -3,641.02 | 3,672.66 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 268.91 | 6,415.00 | 718.46 | -3,741.00 | 3,772.42 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 268.91 | 6,415.00 | 716.56 | -3,840.98 | 3,872.18 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 268.91 | 6,415.00 | 714.67 | -3,940.97 | 3,971.94 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 268.91 | 6,415.00 | 712.77 | -4,040.95 | 4,071.70 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 268.91 | 6,415.00 | 710.87 | -4,140.93 | 4,171.46 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 268.91 | 6,415.00 | 708.97 | -4,240.91 | 4,271.22 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 268.91 | 6,415.00 | 707.07 | -4,340.89 | 4,370.98 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 268.91 | 6,415.00 | 705.17 | -4,440.87 | 4,470.74 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 268.91 | 6,415.00 | 703.27 | -4,540.86 | 4,570.50 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 268.91 | 6,415.00 | 701.38 | -4,640.84 | 4,670.26 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 268.91 | 6,415.00 | 699.48 | -4,740.82 | 4,770.02 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 268.91 | 6,415.00 | 697.58 | -4,840.80 | 4,869.78 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 268.91 | 6,415.00 | 695.68 | -4,940.78 | 4,969.54 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 268.91 | 6,415.00 | 693.78 | -5,040.77 | 5,069.30 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 268.91 | 6,415.00 | 691.88 | -5,140.75 | 5,169.06 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 268.91 | 6,415.00 | 689.99 | -5,240.73 | 5,268.82 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 268.91 | 6,415.00 | 688.09 | -5,340.71 | 5,368.58 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 268.91 | 6,415.00 | 686.19 | -5,440.69 | 5,468.34 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 268.91 | 6,415.00 | 684.29 | -5,540.68 | 5,568.10 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 268.91 | 6,415.00 | 682.39 | -5,640.66 | 5,667.86 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 268.91 | 6,415.00 | 680.49 | -5,740.64 | 5,767.62 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 268.91 | 6,415.00 | 678.60 | -5,840.62 | 5,867.38 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 268.91 | 6,415.00 | 676.70 | -5,940.60 | 5,967.14 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 268.91 | 6,415.00 | 674.80 | -6,040.59 | 6,066.90 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 268.91 | 6,415.00 | 672.90 | -6,140.57 | 6,166.66 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 268.91 | 6,415.00 | 671.00 | -6,240.55 | 6,266.42 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 268.91 | 6,415.00 | 669.10 | -6,340.53 | 6,366.18 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 268.91 | 6,415.00 | 667.21 | -6,440.51 | 6,465.93 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 268.91 | 6,415.00 | 665.31 | -6,540.50 | 6,565.69 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 268.91 | 6,415.00 | 663.41 | -6,640.48 | 6,665.45 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 268.91 | 6,415.00 | 661.51 | -6,740.46 | 6,765.21 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 268.91 | 6,415.00 | 659.61 | -6,840.44 | 6,864.97 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 268.91 | 6,415.00 | 657.71 | -6,940.42 | 6,964.73 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 268.91 | 6,415.00 | 655.81 | -7,040.41 | 7,064.49 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 268.91 | 6,415.00 | 653.92 | -7,140.39 | 7,164.25 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 268.91 | 6,415.00 | 652.02 | -7,240.37 | 7,264.01 | 0.00 | 0.00 | 0.00 |

Noble Energy, Inc.

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Well: | Wells Ranch State AA36-673 | North Reference: | Grid |
| Wellbore: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan 1 | Database: | EDMP |

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) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 13,700.00 | 90.00 | 268.91 | 6,415.00 | 650.12 | -7,340.35 | 7,363.77 | 0.00 | 0.00 | 0.00 |
| 13,800.00 | 90.00 | 268.91 | 6,415.00 | 648.22 | -7,440.33 | 7,463.53 | 0.00 | 0.00 | 0.00 |
| 13,900.00 | 90.00 | 268.91 | 6,415.00 | 646.32 | -7,540.32 | 7,563.29 | 0.00 | 0.00 | 0.00 |
| 14,000.00 | 90.00 | 268.91 | 6,415.00 | 644.42 | -7,640.30 | 7,663.05 | 0.00 | 0.00 | 0.00 |
| 14,100.00 | 90.00 | 268.91 | 6,415.00 | 642.53 | -7,740.28 | 7,762.81 | 0.00 | 0.00 | 0.00 |
| 14,200.00 | 90.00 | 268.91 | 6,415.00 | 640.63 | -7,840.26 | 7,862.57 | 0.00 | 0.00 | 0.00 |
| 14,300.00 | 90.00 | 268.91 | 6,415.00 | 638.73 | -7,940.24 | 7,962.33 | 0.00 | 0.00 | 0.00 |
| 14,400.00 | 90.00 | 268.91 | 6,415.00 | 636.83 | -8,040.23 | 8,062.09 | 0.00 | 0.00 | 0.00 |
| 14,500.00 | 90.00 | 268.91 | 6,415.00 | 634.93 | -8,140.21 | 8,161.85 | 0.00 | 0.00 | 0.00 |
| 14,600.00 | 90.00 | 268.91 | 6,415.00 | 633.03 | -8,240.19 | 8,261.61 | 0.00 | 0.00 | 0.00 |
| 14,700.00 | 90.00 | 268.91 | 6,415.00 | 631.14 | -8,340.17 | 8,361.37 | 0.00 | 0.00 | 0.00 |
| 14,800.00 | 90.00 | 268.91 | 6,415.00 | 629.24 | -8,440.15 | 8,461.13 | 0.00 | 0.00 | 0.00 |
| 14,900.00 | 90.00 | 268.91 | 6,415.00 | 627.34 | -8,540.14 | 8,560.89 | 0.00 | 0.00 | 0.00 |
| 15,000.00 | 90.00 | 268.91 | 6,415.00 | 625.44 | -8,640.12 | 8,660.65 | 0.00 | 0.00 | 0.00 |
| 15,100.00 | 90.00 | 268.91 | 6,415.00 | 623.54 | -8,740.10 | 8,760.41 | 0.00 | 0.00 | 0.00 |
| 15,200.00 | 90.00 | 268.91 | 6,415.00 | 621.64 | -8,840.08 | 8,860.17 | 0.00 | 0.00 | 0.00 |
| 15,300.00 | 90.00 | 268.91 | 6,415.00 | 619.75 | -8,940.06 | 8,959.93 | 0.00 | 0.00 | 0.00 |
| 15,400.00 | 90.00 | 268.91 | 6,415.00 | 617.85 | -9,040.05 | 9,059.69 | 0.00 | 0.00 | 0.00 |
| 15,500.00 | 90.00 | 268.91 | 6,415.00 | 615.95 | -9,140.03 | 9,159.45 | 0.00 | 0.00 | 0.00 |
| 15,600.00 | 90.00 | 268.91 | 6,415.00 | 614.05 | -9,240.01 | 9,259.21 | 0.00 | 0.00 | 0.00 |
| 15,700.00 | 90.00 | 268.91 | 6,415.00 | 612.15 | -9,339.99 | 9,358.97 | 0.00 | 0.00 | 0.00 |
| 15,800.00 | 90.00 | 268.91 | 6,415.00 | 610.25 | -9,439.97 | 9,458.73 | 0.00 | 0.00 | 0.00 |
| 15,900.00 | 90.00 | 268.91 | 6,415.00 | 608.36 | -9,539.96 | 9,558.48 | 0.00 | 0.00 | 0.00 |
| 16,000.00 | 90.00 | 268.91 | 6,415.00 | 606.46 | -9,639.94 | 9,658.24 | 0.00 | 0.00 | 0.00 |
| 16,100.00 | 90.00 | 268.91 | 6,415.00 | 604.56 | -9,739.92 | 9,758.00 | 0.00 | 0.00 | 0.00 |
| 16,200.00 | 90.00 | 268.91 | 6,415.00 | 602.66 | -9,839.90 | 9,857.76 | 0.00 | 0.00 | 0.00 |
| 16,300.00 | 90.00 | 268.91 | 6,415.00 | 600.76 | -9,939.88 | 9,957.52 | 0.00 | 0.00 | 0.00 |
| 16,400.00 | 90.00 | 268.91 | 6,415.00 | 598.86 | -10,039.87 | 10,057.28 | 0.00 | 0.00 | 0.00 |
| 16,500.00 | 90.00 | 268.91 | 6,415.00 | 596.96 | -10,139.85 | 10,157.04 | 0.00 | 0.00 | 0.00 |
| 16,600.00 | 90.00 | 268.91 | 6,415.00 | 595.07 | -10,239.83 | 10,256.80 | 0.00 | 0.00 | 0.00 |
| 16,700.00 | 90.00 | 268.91 | 6,415.00 | 593.17 | -10,339.81 | 10,356.56 | 0.00 | 0.00 | 0.00 |
| 16,800.00 | 90.00 | 268.91 | 6,415.00 | 591.27 | -10,439.79 | 10,456.32 | 0.00 | 0.00 | 0.00 |
| 16,900.00 | 90.00 | 268.91 | 6,415.00 | 589.37 | -10,539.78 | 10,556.08 | 0.00 | 0.00 | 0.00 |
| 17,000.00 | 90.00 | 268.91 | 6,415.00 | 587.47 | -10,639.76 | 10,655.84 | 0.00 | 0.00 | 0.00 |
| 17,100.00 | 90.00 | 268.91 | 6,415.00 | 585.57 | -10,739.74 | 10,755.60 | 0.00 | 0.00 | 0.00 |
| 17,200.00 | 90.00 | 268.91 | 6,415.00 | 583.68 | -10,839.72 | 10,855.36 | 0.00 | 0.00 | 0.00 |
| 17,300.00 | 90.00 | 268.91 | 6,415.00 | 581.78 | -10,939.70 | 10,955.12 | 0.00 | 0.00 | 0.00 |
| 17,400.00 | 90.00 | 268.91 | 6,415.00 | 579.88 | -11,039.69 | 11,054.88 | 0.00 | 0.00 | 0.00 |
| 17,500.00 | 90.00 | 268.91 | 6,415.00 | 577.98 | -11,139.67 | 11,154.64 | 0.00 | 0.00 | 0.00 |
| 17,600.00 | 90.00 | 268.91 | 6,415.00 | 576.08 | -11,239.65 | 11,254.40 | 0.00 | 0.00 | 0.00 |
| 17,700.00 | 90.00 | 268.91 | 6,415.00 | 574.18 | -11,339.63 | 11,354.16 | 0.00 | 0.00 | 0.00 |
| 17,738.38 | 90.00 | 268.91 | 6,415.00 | 573.46 | -11,378.01 | 11,392.45 | 0.00 | 0.00 | 0.00 |

Noble Energy, Inc.

Survey Report

| | | | |
|------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Well: | Wells Ranch State AA36-673 | North Reference: | Grid |
| Wellbore: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Design: | Plan 1 | Database: | EDMP |

Design Targets

Target Name

| - hit/miss target | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude | Longitude |
|---------------------------|------------------|-----------------|-------------|---------------|---------------|--------------------|-------------------|------------|--------------|
| - Shape | | | | | | | | | |
| Wells Ranch State AA36 | 0.00 | 0.00 | 6,415.00 | 573.46 | -11,378.01 | 1,407,597.70 | 3,307,649.07 | 40.4469936 | -104.3945817 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |

Formations

| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|---------------------------|---------------------------|---------------------------|-----------|------------|-------------------------|
| 502.00 | 502.00 | Pierre | | | |
| 582.00 | 582.00 | Upper Pierre Aquifer Top | | | |
| 1,497.00 | 1,497.00 | Upper Pierre Aquifer Base | | | |
| 3,465.11 | 3,447.00 | Parkman | | | |
| 4,211.52 | 4,178.00 | Sussex | | | |
| 4,821.11 | 4,775.00 | Shannon | | | |
| 5,697.21 | 5,633.00 | Teepee Buttes | | | |
| 5,986.90 | 5,916.00 | Top C Chalk | | | |
| 6,504.47 | 6,321.00 | Sharon Springs | | | |
| 6,579.37 | 6,356.00 | Top A Chalk | | | |
| 6,653.67 | 6,383.00 | Top A Marl | | | |

Plan Annotations

| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment |
|---------------------------|---------------------------|-------------------|---------------|----------------------------|
| | | +N/-S (ft) | +E/-W (ft) | |
| 2200 | 2200 | 0 | 0 | KOP - Start Build 2.00 |
| 5817 | 5750 | 658 | 138 | Start DLS 9.00 TFO -115.30 |
| 6579 | 6356 | 773 | -230 | TPZ at 6579.37 MD |
| 6882 | 6415 | 780 | -523 | Landing Pt at 6881.9 MD |
| 17,738 | 6415 | 573 | -11,378 | TD at 17738.38 |

Checked By: _____ Approved By: _____ Date: _____

Northern Region - DJ Basin

Wells Ranch

AE Section 32

Wells Ranch State AA36-673

Wells Ranch State AA36-673

Plan 1

Anticollision Summary Report

08 January, 2018

Noble Energy, Inc.
Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Reference Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wells Ranch State AA36-673 | Database: | EDMP |
| Reference Design: | Plan 1 | Offset TVD Reference: | Offset Datum |

| | | | |
|-------------------------------------|---|-----------------------|---------------------|
| Reference | Plan 1 | | |
| 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 | 1/8/2018 | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
| 0.00 | 17,738.38 | Plan 1 (Wells Ranch State AA36-673) | 2_MWD+IFR1+MS | A008Mb: IFR dec & multi-station analysis |

| Summary | | | | | | |
|---|-------------------------------|----------------------------|-------------------------------|--------------------------------|-------------------|---------------------|
| Site Name | Reference Measured Depth (ft) | Offset Measured Depth (ft) | Distance Between Centres (ft) | Distance Between Ellipses (ft) | Separation Factor | Warning |
| AA Section 35 | | | | | | |
| Wells Ranch USX AA35-65HN - Plan A - Original Drilling | 17,738.38 | 10,987.02 | 1,551.84 | 1,310.55 | 6.432 | CC, ES, SF |
| AA Section 36 | | | | | | |
| Wells Ranch 11-36 - Wells Ranch 11-36 - Wells Ranch 1 | 17,033.78 | 6,443.57 | 500.83 | 343.52 | 3.184 | CC, ES, SF |
| Wells Ranch 12-36 - Wells Ranch 12-36 - Wells Ranch 1 | 17,053.80 | 6,432.65 | 912.14 | 754.63 | 5.791 | CC, ES |
| Wells Ranch 12-36 - Wells Ranch 12-36 - Wells Ranch 1 | 17,100.00 | 6,432.85 | 913.31 | 755.56 | 5.790 | SF |
| Wells Ranch 13-36 - Wells Ranch 13-36 - Wells Ranch 1 | 17,113.63 | 6,420.94 | 2,137.62 | 1,979.43 | 13.513 | CC, ES |
| Wells Ranch 13-36 - Wells Ranch 13-36 - Wells Ranch 1 | 17,300.00 | 6,418.23 | 2,145.73 | 1,986.05 | 13.437 | SF |
| Wells Ranch 14-36 - Wells Ranch 14-36 - Wells Ranch 1 | 17,343.80 | 6,418.31 | 3,607.01 | 3,445.93 | 22.393 | CC |
| Wells Ranch 14-36 - Wells Ranch 14-36 - Wells Ranch 1 | 17,400.00 | 6,418.32 | 3,607.45 | 3,445.75 | 22.309 | ES |
| Wells Ranch 14-36 - Wells Ranch 14-36 - Wells Ranch 1 | 17,738.38 | 6,418.36 | 3,628.53 | 3,463.78 | 22.024 | SF |
| Wells Ranch 21-36 - Wells Ranch 21-36 - Wells Ranch 2 | 15,651.78 | 6,399.37 | 524.35 | 384.12 | 3.739 | CC, ES, SF |
| Wells Ranch 22-36 - Wells Ranch 22-36 - Wells Ranch 2 | 15,599.84 | 6,403.78 | 743.31 | 603.68 | 5.323 | CC |
| Wells Ranch 22-36 - Wells Ranch 22-36 - Wells Ranch 2 | 15,600.00 | 6,403.78 | 743.31 | 603.68 | 5.323 | ES, SF |
| Wells Ranch 23-36 - Wells Ranch 23-36 - Wells Ranch 2 | 15,886.48 | 6,432.88 | 2,112.15 | 1,968.87 | 14.741 | CC |
| Wells Ranch 23-36 - Wells Ranch 23-36 - Wells Ranch 2 | 15,900.00 | 6,432.88 | 2,112.20 | 1,968.77 | 14.727 | ES |
| Wells Ranch 23-36 - Wells Ranch 23-36 - Wells Ranch 2 | 16,100.00 | 6,432.86 | 2,122.92 | 1,977.94 | 14.644 | SF |
| Wells Ranch 24-36 - Wells Ranch 24-36 - Wells Ranch 2 | 15,693.56 | 6,398.28 | 3,717.33 | 3,576.52 | 26.400 | CC |
| Wells Ranch 24-36 - Wells Ranch 24-36 - Wells Ranch 2 | 15,700.00 | 6,398.36 | 3,717.33 | 3,576.45 | 26.386 | ES |
| Wells Ranch 24-36 - Wells Ranch 24-36 - Wells Ranch 2 | 16,300.00 | 6,405.08 | 3,766.46 | 3,620.29 | 25.768 | SF |
| Wells Ranch 31-36 - Wells Ranch 31-36 - Wells Ranch 3 | 14,323.80 | 6,375.54 | 511.25 | 387.23 | 4.122 | CC, ES, SF |
| Wells Ranch 32-36 - Wells Ranch 32-36 - Wells Ranch 3 | 14,252.04 | 6,366.70 | 875.89 | 752.74 | 7.113 | CC, ES |
| Wells Ranch 32-36 - Wells Ranch 32-36 - Wells Ranch 3 | 14,300.00 | 6,366.85 | 877.20 | 753.78 | 7.108 | SF |
| Wells Ranch 33-36 - Wells Ranch 33-36 - Wells Ranch 3 | 14,511.32 | 6,388.41 | 2,178.07 | 2,051.64 | 17.227 | CC, ES |
| Wells Ranch 33-36 - Wells Ranch 33-36 - Wells Ranch 3 | 14,700.00 | 6,386.95 | 2,186.23 | 2,058.16 | 17.071 | SF |
| Wells Ranch 34-36 - Original Drilling - Original Drilling - A | 14,440.43 | 6,386.78 | 3,548.71 | 3,423.16 | 28.264 | CC |
| Wells Ranch 34-36 - Original Drilling - Original Drilling - A | 14,500.00 | 6,386.49 | 3,549.21 | 3,423.00 | 28.121 | ES |
| Wells Ranch 34-36 - Original Drilling - Original Drilling - A | 15,100.00 | 6,383.68 | 3,609.49 | 3,478.29 | 27.512 | SF |
| Wells Ranch 36A - Wells Ranch 36A - Wells Ranch 36A | 16,624.01 | 6,434.62 | 174.28 | 22.03 | 1.145 | Level 2, CC, ES, SF |
| Wells Ranch 36B - Wells Ranch 36B - Wells Ranch 36B | 16,499.58 | 6,435.49 | 2,828.21 | 2,677.45 | 18.760 | CC |
| Wells Ranch 36B - Wells Ranch 36B - Wells Ranch 36B | 16,500.00 | 6,435.49 | 2,828.21 | 2,677.44 | 18.759 | ES |
| Wells Ranch 36B - Wells Ranch 36B - Wells Ranch 36B | 16,800.00 | 6,436.18 | 2,844.12 | 2,690.72 | 18.540 | SF |
| Wells Ranch 36C - Wells Ranch 36C - Wells Ranch 36C | 13,832.36 | 6,366.86 | 215.63 | 97.48 | 1.825 | CC, ES, SF |
| Wells Ranch 36D - Wells Ranch 36D - Wells Ranch 36D | 13,744.25 | 6,384.95 | 2,746.64 | 2,629.48 | 23.443 | CC |
| Wells Ranch 36D - Wells Ranch 36D - Wells Ranch 36D | 13,800.00 | 6,384.60 | 2,747.21 | 2,629.46 | 23.331 | ES |
| Wells Ranch 36D - Wells Ranch 36D - Wells Ranch 36D | 14,100.00 | 6,382.68 | 2,769.58 | 2,649.31 | 23.027 | SF |
| Wells Ranch 36F - Wells Ranch 36F - Wells Ranch 36F | 17,677.42 | 6,454.09 | 233.54 | 68.32 | 1.414 | Level 3, 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 Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Reference Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wells Ranch State AA36-673 | Database: | EDMP |
| Reference Design: | Plan 1 | 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 |
| AA Section 36 | | | | | | |
| Wells Ranch 36H - Wells Ranch 36H - Wells Ranch 36H | 17,647.21 | 6,387.90 | 2,935.48 | 2,770.88 | 17.834 | CC |
| Wells Ranch 36H - Wells Ranch 36H - Wells Ranch 36H | 17,700.00 | 6,387.49 | 2,935.96 | 2,770.79 | 17.776 | ES |
| Wells Ranch 36H - Wells Ranch 36H - Wells Ranch 36H | 17,738.38 | 6,387.20 | 2,936.90 | 2,771.35 | 17.740 | SF |
| Wells Ranch 36J - Original Drilling - As Drilled | 16,374.58 | 6,355.48 | 985.22 | 837.17 | 6.655 | CC |
| Wells Ranch 36J - Original Drilling - As Drilled | 16,400.00 | 6,355.33 | 985.54 | 837.14 | 6.641 | ES, SF |
| Wells Ranch 36K - Wells Ranch 36K - Wells Ranch 36K | 16,329.90 | 6,444.23 | 1,485.67 | 1,337.65 | 10.037 | CC, ES |
| Wells Ranch 36K - Wells Ranch 36K - Wells Ranch 36K | 16,400.00 | 6,443.12 | 1,487.32 | 1,338.74 | 10.010 | SF |
| Wells Ranch 36L - Wells Ranch 36L - Wells Ranch 36L | 16,513.65 | 6,422.46 | 3,983.33 | 3,833.19 | 26.531 | CC |
| Wells Ranch 36L - Wells Ranch 36L - Wells Ranch 36L | 16,600.00 | 6,422.61 | 3,984.26 | 3,833.16 | 26.368 | ES |
| Wells Ranch 36L - Wells Ranch 36L - Wells Ranch 36L | 17,200.00 | 6,423.65 | 4,042.03 | 3,885.91 | 25.891 | SF |
| Wells Ranch 36N - Wells Ranch 36N - Wells Ranch 36N | 15,104.17 | 6,392.75 | 226.75 | 45.72 | 1.253 | Level 3, CC, ES, SF |
| Wells Ranch 36O - Wells Ranch 36O - Wells Ranch 36O | 15,031.68 | 6,393.75 | 1,375.84 | 1,243.86 | 10.424 | CC, ES |
| Wells Ranch 36O - Wells Ranch 36O - Wells Ranch 36O | 15,100.00 | 6,393.13 | 1,377.53 | 1,245.00 | 10.393 | SF |
| Wells Ranch 36P - Wells Ranch 36P - Wells Ranch 36P | 14,904.11 | 6,383.61 | 2,884.24 | 2,753.87 | 22.124 | CC, ES |
| Wells Ranch 36P - Wells Ranch 36P - Wells Ranch 36P | 15,300.00 | 6,381.54 | 2,911.28 | 2,777.54 | 21.768 | SF |
| Wells Ranch 36R - Wells Ranch 36R - Wells Ranch 36R | 13,653.99 | 6,376.52 | 963.87 | 847.97 | 8.317 | CC, ES |
| Wells Ranch 36R - Wells Ranch 36R - Wells Ranch 36R | 13,700.00 | 6,376.70 | 964.96 | 848.47 | 8.283 | SF |
| Wells Ranch 36S - Wells Ranch 36S - Wells Ranch 36S | 13,842.18 | 6,381.21 | 1,540.77 | 1,423.23 | 13.109 | CC, ES |
| Wells Ranch 36S - Wells Ranch 36S - Wells Ranch 36S | 14,000.00 | 6,380.30 | 1,548.83 | 1,430.19 | 13.055 | SF |
| Wells Ranch 36T - Wells Ranch 36T - Wells Ranch 36T | 13,768.14 | 6,383.95 | 4,038.34 | 3,921.78 | 34.646 | CC |
| Wells Ranch 36T - Wells Ranch 36T - Wells Ranch 36T | 13,800.00 | 6,384.10 | 4,038.47 | 3,921.55 | 34.541 | ES |
| Wells Ranch 36T - Wells Ranch 36T - Wells Ranch 36T | 14,600.00 | 6,387.68 | 4,123.13 | 3,999.15 | 33.259 | SF |
| Wells Ranch 36V - Wells Ranch 36V - Wells Ranch 36V | 12,661.99 | 6,343.96 | 245.83 | 142.83 | 2.387 | CC, ES, SF |
| Wells Ranch 41-36 - Wells Ranch 41-36 - Wells Ranch 4 | 13,117.78 | 6,358.81 | 451.85 | 342.39 | 4.128 | CC, ES, SF |
| Wells Ranch 42-36 - Wells Ranch 42-36 - Wells Ranch 4 | 13,155.38 | 6,355.83 | 803.98 | 693.99 | 7.310 | CC, ES |
| Wells Ranch 42-36 - Wells Ranch 42-36 - Wells Ranch 4 | 13,200.00 | 6,355.83 | 805.21 | 694.99 | 7.305 | SF |
| Wells Ranch 43-36 - Wells Ranch 43-36 - Wells Ranch 4 | 13,177.67 | 6,352.50 | 2,126.28 | 2,016.03 | 19.287 | CC |
| Wells Ranch 43-36 - Wells Ranch 43-36 - Wells Ranch 4 | 13,200.00 | 6,352.50 | 2,126.39 | 2,015.92 | 19.248 | ES |
| Wells Ranch 43-36 - Wells Ranch 43-36 - Wells Ranch 4 | 13,400.00 | 6,352.48 | 2,137.87 | 2,025.73 | 19.065 | SF |
| Wells Ranch 44-36 - Wells Ranch 44-36 - Wells Ranch 4 | 13,007.17 | 6,408.40 | 3,679.57 | 3,571.17 | 33.943 | CC, ES |
| Wells Ranch 44-36 - Wells Ranch 44-36 - Wells Ranch 4 | 13,800.00 | 6,413.23 | 3,764.02 | 3,648.71 | 32.645 | SF |
| Wells Ranch AA35-62-1AHNC - Original Drilling - Origina | 17,738.38 | 6,465.00 | 3,656.64 | 3,491.93 | 22.200 | CC, ES, SF |
| Wells Ranch AA35-62-1BHNC - Original Drilling - Origina | 17,738.38 | 6,467.00 | 3,960.16 | 3,795.88 | 24.105 | CC, ES, SF |
| Wells Ranch AA35-62-1HNA - Original Drilling - Original | 17,738.38 | 6,277.00 | 3,807.87 | 3,644.44 | 23.299 | CC, ES, SF |
| Wells Ranch AA35-63-1AHNA - Original Drilling - Origina | 17,738.38 | 5,969.93 | 2,918.15 | 2,757.48 | 18.162 | CC, ES, SF |
| Wells Ranch AA35-63-1BHNA - Original Drilling - Origina | 17,738.38 | 6,136.00 | 3,337.66 | 3,175.42 | 20.572 | CC, ES, SF |
| Wells Ranch AA35-63-1HNC - Original Drilling - Original | 16,700.00 | 16,700.00 | 3,227.43 | 3,044.12 | 17.607 | SF |
| Wells Ranch AA35-63-1HNC - Original Drilling - Original | 17,735.28 | 5,937.56 | 3,056.95 | 2,896.39 | 19.040 | CC |
| Wells Ranch AA35-63-1HNC - Original Drilling - Original | 17,738.38 | 5,937.63 | 3,056.95 | 2,896.36 | 19.036 | ES |
| Wells Ranch AA35-64-1AHNA - Original Drilling - Origina | 17,738.38 | 6,354.43 | 2,426.40 | 2,263.21 | 14.868 | CC, ES, SF |
| Wells Ranch AA35-64-1BHNC - Original Drilling - Origina | 17,738.38 | 6,439.64 | 2,584.73 | 2,420.95 | 15.782 | CC, ES, SF |
| Wells Ranch AA35-65-1AHNA - Original Drilling - Origina | 17,738.38 | 6,409.36 | 1,769.94 | 1,605.93 | 10.791 | CC, ES, SF |
| Wells Ranch AA35-65-1BHNC - Original Drilling - Origina | 17,738.38 | 6,520.00 | 1,931.99 | 1,768.15 | 11.792 | CC, ES, SF |
| Wells Ranch AA35-66-1AHNC - Original Drilling - Origina | 17,738.38 | 6,451.86 | 1,000.65 | 837.58 | 6.136 | CC, ES, SF |
| Wells Ranch AA35-67-1AHNA - Original Drilling - Origina | 17,738.38 | 6,415.71 | 345.24 | 208.68 | 2.528 | CC, ES, SF |
| Wells Ranch AA35-67-1BHNA - Original Drilling - Origina | 17,738.38 | 6,379.33 | 702.38 | 544.79 | 4.457 | CC, ES, SF |
| Wells Ranch AA35-67-1HNC - Original Drilling - Original | 17,738.38 | 6,437.75 | 521.82 | 361.99 | 3.265 | CC, ES, SF |
| Wells Ranch AA35-68-1AHNA - Original Drilling - Origina | 17,738.38 | 6,447.96 | 283.22 | 137.74 | 1.947 | CC, ES, SF |
| Wells Ranch AA35-68-1BHNC - Original Drilling - Origina | 17,738.38 | 6,500.46 | 106.44 | -15.28 | 0.874 | Level 1, CC, ES, SF |
| Wells Ranch AA35-69-1AHNC - Original Drilling - Origina | 17,738.38 | 6,508.38 | 980.08 | 816.26 | 5.982 | CC, ES, SF |
| Wells Ranch AA35-69-1BHNC - Original Drilling - Origina | 17,738.38 | 6,495.69 | 658.18 | 494.34 | 4.017 | CC, ES, SF |
| Wells Ranch AA35-69-1HNB - Original Drilling - Original | 17,738.38 | 6,449.12 | 826.95 | 663.55 | 5.061 | CC, ES, SF |
| Wells Ranch USX AA35-14 - Wellbore #1 - Wellbore #1 - | 17,738.38 | 6,412.01 | 4,858.82 | 4,739.33 | 40.664 | 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 Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Reference Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wells Ranch State AA36-673 | Database: | EDMP |
| Reference Design: | Plan 1 | 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 | | | | | | |
| AE Section 31 | | | | | | |
| UPRR-Wells 1 - UPRR-Wells 1 - UPRR-Wells 1 - As Drill | 11,859.10 | 6,340.00 | 3,490.41 | 3,362.57 | 27.302 | CC |
| UPRR-Wells 1 - UPRR-Wells 1 - UPRR-Wells 1 - As Drill | 11,900.00 | 6,340.00 | 3,490.65 | 3,362.36 | 27.210 | ES |
| UPRR-Wells 1 - UPRR-Wells 1 - UPRR-Wells 1 - As Drill | 12,500.00 | 6,340.00 | 3,548.76 | 3,415.07 | 26.545 | SF |
| Wells Ranch USX AE31-01P - Wells Ranch USX AE31-0 | 7,732.57 | 6,380.62 | 391.73 | 340.45 | 7.638 | CC, ES, SF |
| Wells Ranch USX AE31-02P - Wells Ranch USX AE31-0 | 9,136.21 | 6,381.46 | 422.44 | 358.53 | 6.610 | CC, ES, SF |
| Wells Ranch USX AE31-03P - Wells Ranch USX AE31-0 | 10,472.77 | 6,369.81 | 455.78 | 377.28 | 5.806 | CC, ES |
| Wells Ranch USX AE31-03P - Wells Ranch USX AE31-0 | 10,500.00 | 6,370.26 | 456.59 | 377.70 | 5.788 | SF |
| Wells Ranch USX AE31-04 - Wells Ranch USX AE31-04 | 11,818.60 | 6,340.14 | 437.53 | 343.39 | 4.648 | CC, ES, SF |
| Wells Ranch USX AE31-05P - Wells Ranch USX AE31-0 | 11,907.18 | 6,342.00 | 864.90 | 736.48 | 6.735 | CC, ES, SF |
| Wells Ranch USX AE31-06 - Wells Ranch USX AE31-06 | 10,405.16 | 6,401.86 | 889.06 | 810.98 | 11.385 | CC, ES |
| Wells Ranch USX AE31-06 - Wells Ranch USX AE31-06 | 10,500.00 | 6,400.27 | 894.11 | 815.52 | 11.378 | SF |
| Wells Ranch USX AE31-07P - Wells Ranch USX AE31-0 | 9,134.47 | 6,374.39 | 751.89 | 687.82 | 11.736 | CC, ES |
| Wells Ranch USX AE31-07P - Wells Ranch USX AE31-0 | 9,200.00 | 6,374.87 | 754.74 | 690.32 | 11.717 | SF |
| Wells Ranch USX AE31-09P - Wells Ranch USX AE31-0 | 2,264.57 | 2,238.25 | 1,983.96 | 1,968.41 | 127.577 | CC |
| Wells Ranch USX AE31-09P - Wells Ranch USX AE31-0 | 7,926.83 | 6,349.87 | 1,998.04 | 1,945.40 | 37.955 | ES |
| Wells Ranch USX AE31-09P - Wells Ranch USX AE31-0 | 8,400.00 | 6,350.54 | 2,053.30 | 1,997.60 | 36.859 | SF |
| Wells Ranch USX AE31-10P - Wells Ranch USX AE31-1 | 9,109.54 | 6,360.07 | 2,117.81 | 2,054.08 | 33.234 | CC, ES |
| Wells Ranch USX AE31-10P - Wells Ranch USX AE31-1 | 9,500.00 | 6,357.73 | 2,153.50 | 2,086.73 | 32.253 | SF |
| Wells Ranch USX AE31-11P - Wells Ranch USX AE31-1 | 10,739.56 | 6,377.21 | 2,217.31 | 2,135.62 | 27.142 | CC, ES |
| Wells Ranch USX AE31-11P - Wells Ranch USX AE31-1 | 11,100.00 | 6,372.02 | 2,246.41 | 2,161.78 | 26.543 | SF |
| Wells Ranch USX AE31-12 - Wells Ranch USX AE31-12 | 11,903.64 | 6,370.44 | 2,172.82 | 2,077.63 | 22.825 | CC, ES |
| Wells Ranch USX AE31-12 - Wells Ranch USX AE31-12 | 12,200.00 | 6,370.98 | 2,192.94 | 2,095.28 | 22.455 | SF |
| Wells Ranch USX AE31-14 - Wells Ranch USX AE31-14 | 10,517.35 | 6,320.34 | 3,482.98 | 3,404.11 | 44.160 | CC, ES |
| Wells Ranch USX AE31-14 - Wells Ranch USX AE31-14 | 11,500.00 | 6,318.54 | 3,618.94 | 3,531.80 | 41.530 | SF |
| Wells Ranch USX AE31-15 - Wells Ranch USX AE31-15 | 9,225.95 | 6,312.91 | 3,477.52 | 3,412.76 | 53.702 | CC, ES |
| Wells Ranch USX AE31-15 - Wells Ranch USX AE31-15 | 10,400.00 | 6,299.84 | 3,670.34 | 3,596.12 | 49.455 | SF |
| Wells Ranch USX AE31-16P - Wells Ranch USX AE31-1 | 100.00 | 34.35 | 2,944.23 | 2,944.04 | 10,000.000 | CC |
| Wells Ranch USX AE31-16P - Wells Ranch USX AE31-1 | 2,200.00 | 2,136.27 | 2,957.03 | 2,942.08 | 197.767 | ES |
| Wells Ranch USX AE31-16P - Wells Ranch USX AE31-1 | 9,100.00 | 6,342.13 | 3,538.19 | 3,477.38 | 58.181 | SF |
| Wells Ranch USX AE31-98HZ - Wellbore #1 - Original D | 10,711.64 | 10,260.18 | 165.08 | 96.72 | 2.415 | CC |
| Wells Ranch USX AE31-98HZ - Wellbore #1 - Original D | 10,800.00 | 10,319.68 | 177.13 | 92.98 | 2.105 | ES |
| Wells Ranch USX AE31-98HZ - Wellbore #1 - Original D | 10,900.00 | 10,390.25 | 214.27 | 105.46 | 1.969 | SF |
| Wells Ranch USX AE31-99HZ - Wellbore #1 - Original D | 11,670.77 | 6,186.08 | 456.69 | 369.07 | 5.212 | CC, ES, SF |

Noble Energy, Inc.
Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Reference Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wells Ranch State AA36-673 | Database: | EDMP |
| Reference Design: | Plan 1 | 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 | | | | | | |
| AE Section 32 | | | | | | |
| Wells Ranch AE32-05 - Wells Ranch AE32-05 - Wells Ra | 100.00 | 71.88 | 39.54 | 39.29 | 157.032 | CC |
| Wells Ranch AE32-05 - Wells Ranch AE32-05 - Wells Ra | 600.00 | 571.70 | 42.22 | 38.47 | 11.270 | ES |
| Wells Ranch AE32-05 - Wells Ranch AE32-05 - Wells Ra | 2,300.00 | 2,271.61 | 60.86 | 45.06 | 3.852 | SF |
| Wells Ranch AE32-615 - Original Drilling - Original Drillin | 100.00 | 80.49 | 2,661.66 | 2,661.40 | 10,000.000 | CC |
| Wells Ranch AE32-615 - Original Drilling - Original Drillin | 1,500.00 | 1,476.18 | 2,663.47 | 2,654.92 | 311.300 | ES |
| Wells Ranch AE32-615 - Original Drilling - Original Drillin | 8,800.00 | 6,057.00 | 4,194.16 | 4,138.68 | 75.601 | SF |
| Wells Ranch AE32-620 - Original Drilling - Original Drillin | 2,222.86 | 2,228.00 | 2,613.35 | 2,599.79 | 192.735 | CC, ES |
| Wells Ranch AE32-620 - Original Drilling - Original Drillin | 8,200.00 | 6,121.90 | 3,653.57 | 3,602.62 | 71.708 | SF |
| Wells Ranch AE32-625 - Original Drilling - Original Drillin | 2,391.95 | 2,555.07 | 2,520.60 | 2,505.19 | 163.608 | CC |
| Wells Ranch AE32-625 - Original Drilling - Original Drillin | 2,400.00 | 2,561.00 | 2,520.61 | 2,505.15 | 163.055 | ES |
| Wells Ranch AE32-635 - Original Drilling - Original Drillin | 6,350.00 | 6,797.47 | 3,085.24 | 3,038.30 | 65.720 | SF |
| Wells Ranch AE32-630 - Original Drilling - Original Drillin | 2,240.73 | 2,259.56 | 2,532.13 | 2,518.58 | 186.789 | CC, ES |
| Wells Ranch AE32-630 - Original Drilling - Original Drillin | 6,200.00 | 7,072.00 | 2,686.51 | 2,638.42 | 55.863 | SF |
| Wells Ranch AE32-635 - Original Drilling - Original Drillin | 100.00 | 83.83 | 1,307.79 | 1,307.52 | 4,840.295 | CC |
| Wells Ranch AE32-635 - Original Drilling - Original Drillin | 500.00 | 478.32 | 1,308.99 | 1,306.61 | 548.844 | ES |
| Wells Ranch AE32-635 - Original Drilling - Original Drillin | 6,200.00 | 6,951.55 | 2,383.72 | 2,335.63 | 49.571 | SF |
| Wells Ranch AE32-640 - Original Drilling - Original Drillin | 100.00 | 83.79 | 1,271.74 | 1,271.47 | 4,707.567 | CC |
| Wells Ranch AE32-640 - Original Drilling - Original Drillin | 500.00 | 478.08 | 1,273.02 | 1,270.64 | 533.818 | ES |
| Wells Ranch AE32-640 - Original Drilling - Original Drillin | 6,600.00 | 6,600.00 | 2,117.12 | 2,070.60 | 45.507 | SF |
| Wells Ranch AE32-645 - Original Drilling - Original Drillin | 2,228.07 | 2,231.47 | 1,198.42 | 1,183.79 | 81.946 | CC, ES |
| Wells Ranch AE32-645 - Original Drilling - Original Drillin | 6,250.00 | 6,784.61 | 1,752.30 | 1,704.63 | 36.757 | SF |
| Wells Ranch AE32-650 - Original Drilling - Original Drillin | 100.00 | 83.97 | 1,195.68 | 1,195.41 | 4,421.659 | CC |
| Wells Ranch AE32-650 - Original Drilling - Original Drillin | 2,200.00 | 2,181.28 | 1,201.70 | 1,187.54 | 84.887 | ES |
| Wells Ranch AE32-650 - Original Drilling - Original Drillin | 6,375.48 | 6,852.14 | 1,338.88 | 1,291.71 | 28.385 | SF |
| Wells Ranch AE32-655 - Original Drilling - Original Drillin | 1,785.97 | 1,782.02 | 171.64 | 160.36 | 15.228 | CC |
| Wells Ranch AE32-655 - Original Drilling - Original Drillin | 1,800.00 | 1,795.28 | 171.67 | 160.30 | 15.103 | ES |
| Wells Ranch AE32-655 - Original Drilling - Original Drillin | 2,100.00 | 2,078.53 | 186.36 | 173.03 | 13.980 | SF |
| Wells Ranch AE32-665 - Original Drilling - Original Drillin | 1,418.05 | 1,415.13 | 168.06 | 159.83 | 20.413 | CC |
| Wells Ranch AE32-665 - Original Drilling - Original Drillin | 1,500.00 | 1,496.42 | 168.21 | 159.40 | 19.087 | ES |
| Wells Ranch AE32-665 - Original Drilling - Original Drillin | 6,550.00 | 6,542.13 | 479.70 | 433.99 | 10.496 | SF |
| Wells Ranch AE32-670 - Original Drilling - Original Drillin | 6,634.06 | 6,567.86 | 94.77 | 48.88 | 2.065 | CC, ES, SF |
| Wells Ranch AE32-675 - Original Drilling - Original Drillin | 6,667.53 | 6,523.97 | 169.34 | 123.38 | 3.685 | CC, ES, SF |
| Wells Ranch AE32-685 - Original Drilling - Original Drillin | 6,681.35 | 6,512.54 | 841.34 | 794.99 | 18.151 | CC, ES |
| Wells Ranch AE32-685 - Original Drilling - Original Drillin | 6,750.00 | 6,480.46 | 844.18 | 797.57 | 18.111 | SF |
| Wells Ranch AE32-690 - Original Drilling - Original Drillin | 6,958.10 | 6,087.00 | 1,088.44 | 1,043.05 | 23.977 | CC, ES |
| Wells Ranch AE32-690 - Original Drilling - Original Drillin | 7,100.00 | 6,087.00 | 1,097.65 | 1,051.37 | 23.716 | SF |
| Wells Ranch AF05-690 - Original Drilling - Original Drillin | 1,042.36 | 1,021.37 | 2,697.38 | 2,691.66 | 471.991 | CC |
| Wells Ranch AF05-690 - Original Drilling - Original Drillin | 2,200.00 | 2,169.85 | 2,701.63 | 2,688.34 | 203.324 | ES |
| Wells Ranch AF05-690 - Original Drilling - Original Drillin | 8,900.00 | 5,774.00 | 4,325.98 | 4,271.82 | 79.871 | SF |
| Wells Ranch State AA36-622 - Wells Ranch State AA36- | 2,000.00 | 1,994.00 | 1,291.50 | 1,277.65 | 93.240 | CC, ES |
| Wells Ranch State AA36-622 - Wells Ranch State AA36- | 17,738.38 | 17,892.77 | 3,333.44 | 3,047.22 | 11.646 | SF |
| Wells Ranch State AA36-633 - Wells Ranch State AA36- | 2,200.00 | 2,195.00 | 1,254.05 | 1,238.76 | 82.024 | CC, ES |
| Wells Ranch State AA36-633 - Wells Ranch State AA36- | 17,738.38 | 17,874.82 | 2,626.17 | 2,337.88 | 9.110 | SF |
| Wells Ranch State AA36-643 - Wells Ranch State AA36- | 2,200.00 | 2,205.00 | 1,216.58 | 1,201.26 | 79.387 | CC, ES |
| Wells Ranch State AA36-643 - Wells Ranch State AA36- | 17,738.38 | 17,821.94 | 1,969.82 | 1,682.49 | 6.856 | SF |
| Wells Ranch State AA36-654 - Wells Ranch State AA36- | 2,693.91 | 2,886.17 | 1,134.74 | 1,115.40 | 58.681 | CC |
| Wells Ranch State AA36-654 - Wells Ranch State AA36- | 17,738.38 | 17,923.78 | 1,230.82 | 941.80 | 4.259 | ES, SF |
| Wells Ranch State AA36-664 - Wells Ranch State AA36- | 2,200.00 | 2,200.00 | 104.94 | 89.63 | 8.856 | CC, ES |
| Wells Ranch State AA36-664 - Wells Ranch State AA36- | 17,738.38 | 17,809.92 | 597.61 | 311.25 | 2.087 | SF |
| Wells Ranch State AA36-683 - Wells Ranch State AA36- | 2,000.00 | 2,001.00 | 37.63 | 23.76 | 2.712 | CC, ES |
| Wells Ranch State AA36-683 - Wells Ranch State AA36- | 17,738.38 | 17,992.81 | 683.24 | 397.58 | 2.392 | SF |

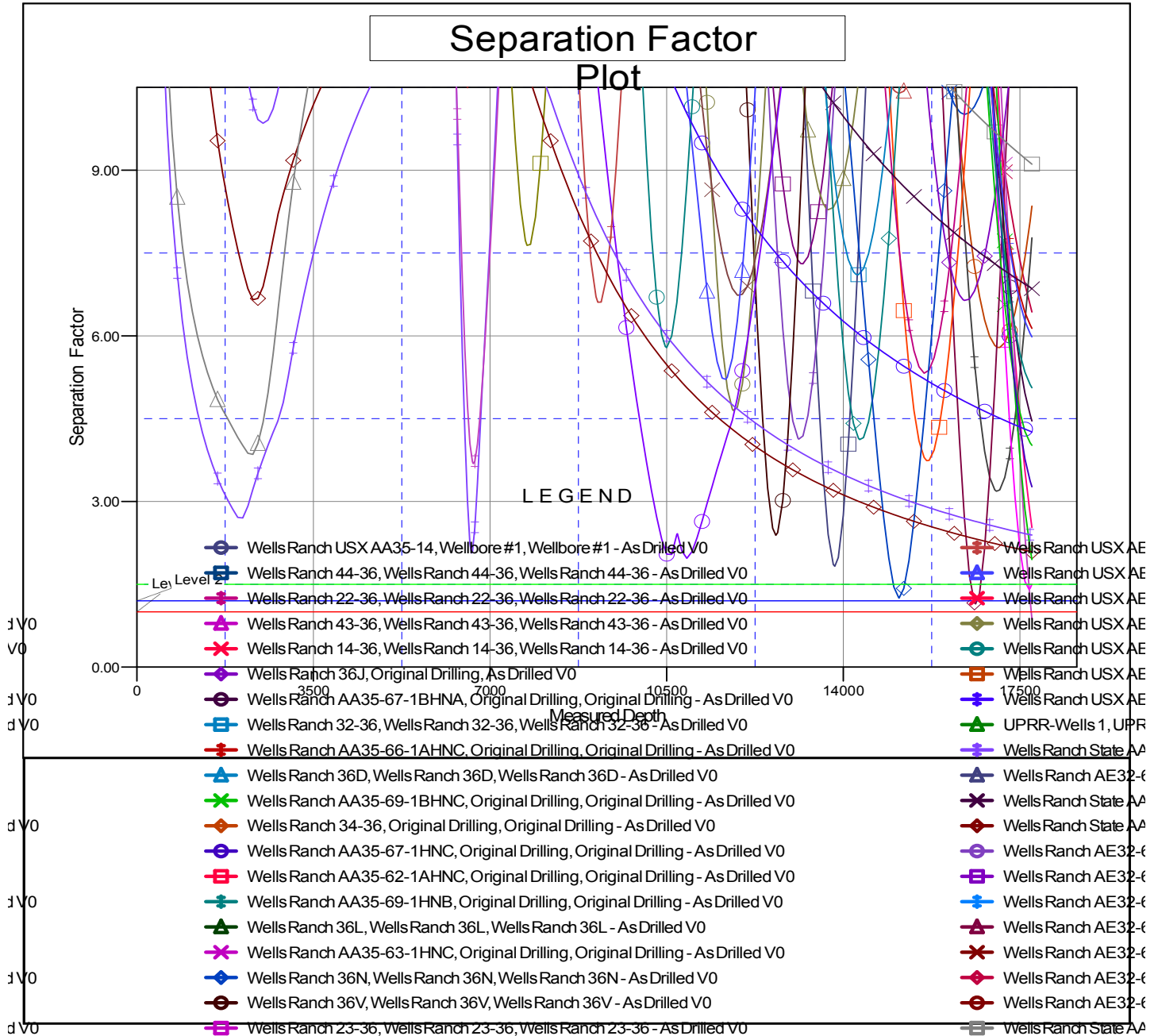
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Noble Energy, Inc.
Anticollision Summary Report

| | | | |
|---------------------------|----------------------------|-------------------------------------|---------------------------------|
| Company: | Northern Region - DJ Basin | Local Co-ordinate Reference: | Well Wells Ranch State AA36-673 |
| Project: | Wells Ranch | TVD Reference: | Well @ 4761.00ft |
| Reference Site: | AE Section 32 | MD Reference: | Well @ 4761.00ft |
| Site Error: | 0.00 ft | North Reference: | Grid |
| Reference Well: | Wells Ranch State AA36-673 | Survey Calculation Method: | Minimum Curvature |
| Well Error: | 0.00 ft | Output errors are at | 2.00 sigma |
| Reference Wellbore | Wells Ranch State AA36-673 | Database: | EDMP |
| Reference Design: | Plan 1 | Offset TVD Reference: | Offset Datum |

Reference Depths are relative to Well @ 4761.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -105.5000000

Coordinates are relative to: Wells Ranch State AA36-673
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.74°



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