

Project: Mustang  
 Site: CC Section 29  
 Well: Gutteresen CC32-765  
 Wellbore: Gutteresen CC32-765  
 Design: Plan #1

# Northern Region - DJ Basin

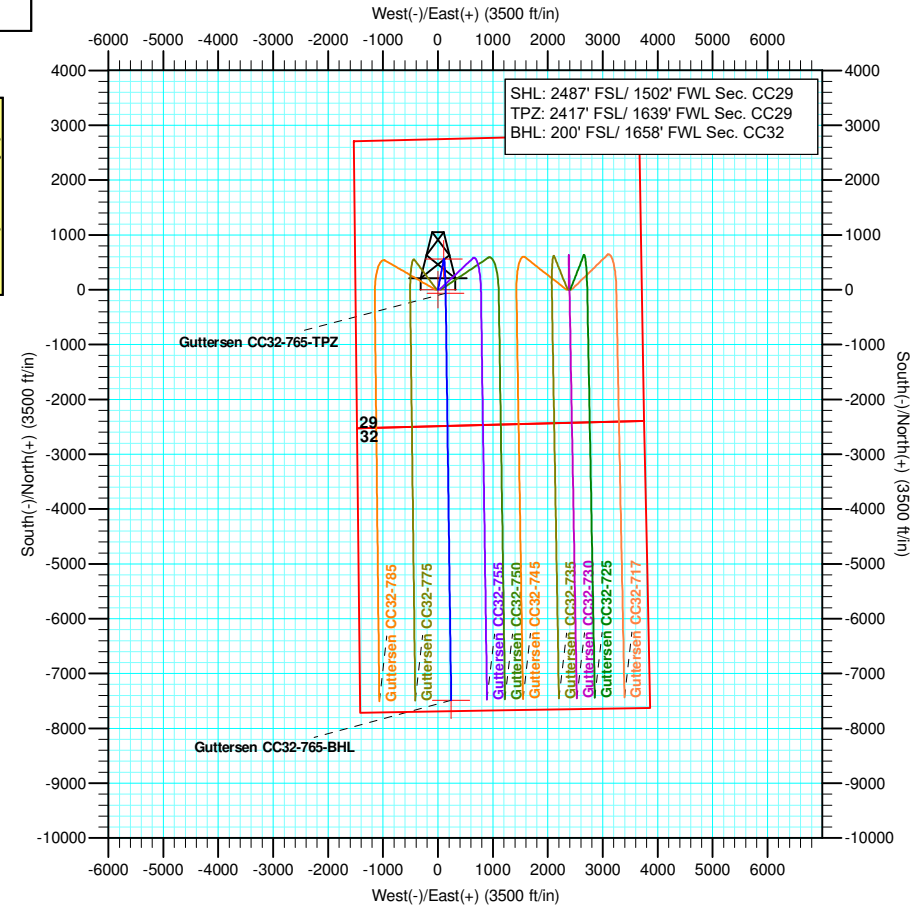
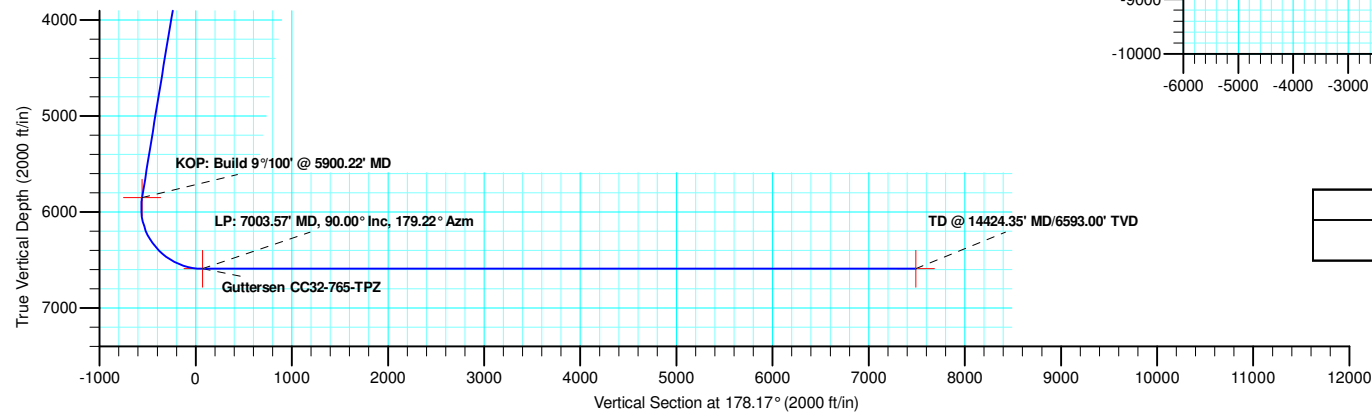
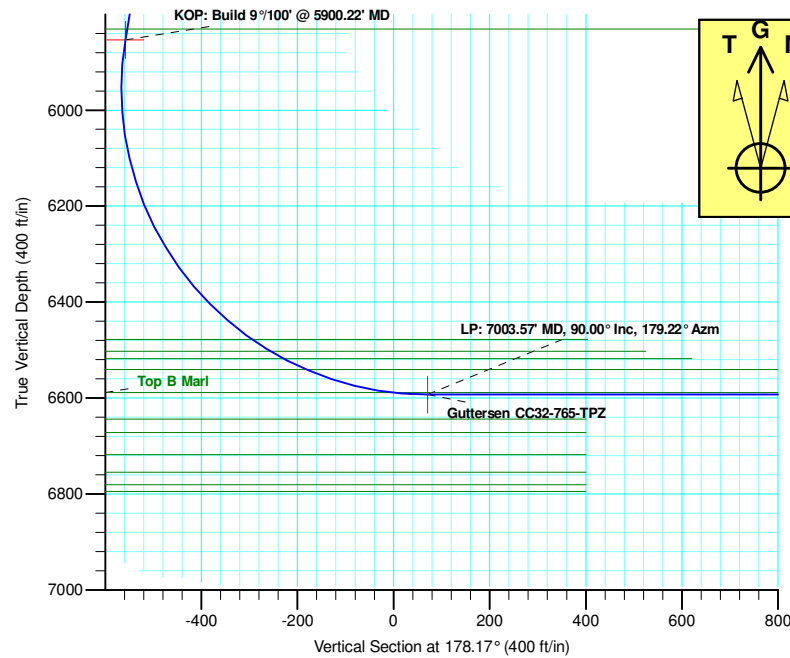
Geodetic System: US State Plane 1983  
 Datum: North American Datum 1983  
 Ellipsoid: GRS 1980  
 Zone: Colorado Northern Zone  
 System Datum: Mean Sea Level

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   | 2674.61  | 9.49  | 10.65  | 2672.44 | 38.55    | 7.25   | 2.00 | 10.65  | -38.30  |                         |
| 4   | 5900.22  | 9.49  | 10.65  | 5853.88 | 561.33   | 105.55 | 0.00 | 0.00   | -557.67 |                         |
| 5   | 7003.57  | 90.00 | 179.22 | 6593.00 | -66.53   | 138.56 | 9.00 | 168.42 | 70.92   | Gutteresen CC32-765-TPZ |
| 6   | 14424.35 | 90.00 | 179.22 | 6593.00 | -7486.62 | 239.34 | 0.00 | 0.00   | 7490.44 | Gutteresen CC32-765-BHL |

WELL DETAILS: Gutteresen CC32-765

| +N/-S | +E/-W | Northing   | Ground Level:<br>Easting | 4762.00<br>Latitude | Longitude    | Slot |
|-------|-------|------------|--------------------------|---------------------|--------------|------|
| 0.00  | 0.00  | 1347598.54 | 3288561.94               | 40.2829380          | -104.4656720 |      |



Plan: Plan #1 (Gutteresen CC32-765/Gutteresen CC32-765)

Created By: Keith Noack Date: 11:16, October 15 2018

# **Northern Region - DJ Basin**

**Mustang**

**CC Section 29**

**Guttersen CC32-765**

**Guttersen CC32-765**

**Plan: Plan #1**

## **Standard Planning Report**

**15 October, 2018**

# Noble Energy, Inc.

## Planning Report

|                  |                            |                                     |                         |
|------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDMP                       | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Company:</b>  | Northern Region - DJ Basin | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Project:</b>  | Mustang                    | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site:</b>     | CC Section 29              | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Guttersen CC32-765         |                                     |                         |
| <b>Design:</b>   | Plan #1                    |                                     |                         |

|                    |                               |                      |                |
|--------------------|-------------------------------|----------------------|----------------|
| <b>Project</b>     | Mustang, Weld County Colorado |                      |                |
| <b>Map System:</b> | US State Plane 1983           | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983     |                      |                |
| <b>Map Zone:</b>   | Colorado Northern Zone        |                      |                |

| Site                  |          | CC Section 29 |                   |                   |              |
|-----------------------|----------|---------------|-------------------|-------------------|--------------|
| Site Position:        |          | Northing:     | 1,347,029.76 usft | Latitude:         | 40.2812800   |
| From:                 | Lat/Long | Easting:      | 3,291,568.57 usft | Longitude:        | -104.4549200 |
| Position Uncertainty: | 0.00 ft  | Slot Radius:  | 13.200 in         | Grid Convergence: | 0.68 °       |

| Well                 | Guttersen CC32-765 |              |                     |                   |               |              |
|----------------------|--------------------|--------------|---------------------|-------------------|---------------|--------------|
| Well Position        | +N/-S              | 568.78 ft    | Northing:           | 1,347,598.54 usft | Latitude:     | 40.2829380   |
|                      | +E/-W              | -3,006.63 ft | Easting:            | 3,288,561.94 usft | Longitude:    | -104.4656720 |
| Position Uncertainty |                    | 0.00 ft      | Wellhead Elevation: |                   | Ground Level: | 4,762.00 ft  |

|                  |                    |                    |                        |                      |                            |
|------------------|--------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Guttersen CC32-765 |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b>  | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2015           | 10/15/2018         | 7.90                   | 66.77                | 52,211.46576098            |

|                          |                              |                   |                      |                      |
|--------------------------|------------------------------|-------------------|----------------------|----------------------|
| <b>Design</b>            | Plan #1                      |                   |                      |                      |
| <b>Audit Notes:</b>      |                              |                   |                      |                      |
| <b>Version:</b>          | <b>Phase:</b>                | PLAN              | <b>Tie On Depth:</b> | 0.00                 |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b> | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |
|                          | 0.00                         | 0.00              | 0.00                 | 178.17               |

| <b>Plan Sections</b> |                 |             |                     |            |            |                       |                      |                     |         |                   |
|----------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-------------------|
| 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    |                   |
| 2,200.00             | 0.00            | 0.00        | 2,200.00            | 0.00       | 0.00       | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 2,674.61             | 9.49            | 10.65       | 2,672.44            | 38.55      | 7.25       | 2.00                  | 2.00                 | 0.00                | 10.65   |                   |
| 5,900.22             | 9.49            | 10.65       | 5,853.88            | 561.33     | 105.55     | 0.00                  | 0.00                 | 0.00                | 0.00    |                   |
| 7,003.58             | 90.00           | 179.22      | 6,593.00            | -66.53     | 138.56     | 9.00                  | 7.30                 | 15.28               | 168.42  | Guttersen CC32-76 |
| 14,424.35            | 90.00           | 179.22      | 6,593.00            | -7,486.62  | 239.34     | 0.00                  | 0.00                 | 0.00                | 0.00    | Guttersen CC32-76 |

# Noble Energy, Inc.

## Planning Report

|                  |                            |                                     |                         |
|------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDMP                       | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Company:</b>  | Northern Region - DJ Basin | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Project:</b>  | Mustang                    | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site:</b>     | CC Section 29              | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Guttersen CC32-765         |                                     |                         |
| <b>Design:</b>   | Plan #1                    |                                     |                         |

| 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                |
| 65.00                              | 0.00            | 0.00        | 65.00               | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| <b>Upper Pierre Aquifer Top</b>    |                 |             |                     |            |            |                       |                       |                      |                     |
| 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                |
| 401.00                             | 0.00            | 0.00        | 401.00              | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| <b>Pierre</b>                      |                 |             |                     |            |            |                       |                       |                      |                     |
| 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                |
| 1,600.00                           | 0.00            | 0.00        | 1,600.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| 1,603.00                           | 0.00            | 0.00        | 1,603.00            | 0.00       | 0.00       | 0.00                  | 0.00                  | 0.00                 | 0.00                |
| <b>Upper Pierre Aquifer Base</b>   |                 |             |                     |            |            |                       |                       |                      |                     |
| 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                |
| <b>Build: 2°/100'</b>              |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,300.00                           | 2.00            | 10.65       | 2,299.98            | 1.72       | 0.32       | -1.70                 | 2.00                  | 2.00                 | 0.00                |
| 2,400.00                           | 4.00            | 10.65       | 2,399.84            | 6.86       | 1.29       | -6.81                 | 2.00                  | 2.00                 | 0.00                |
| 2,500.00                           | 6.00            | 10.65       | 2,499.45            | 15.42      | 2.90       | -15.32                | 2.00                  | 2.00                 | 0.00                |
| 2,600.00                           | 8.00            | 10.65       | 2,598.70            | 27.40      | 5.15       | -27.22                | 2.00                  | 2.00                 | 0.00                |
| 2,674.61                           | 9.49            | 10.65       | 2,672.44            | 38.55      | 7.25       | -38.30                | 2.00                  | 2.00                 | 0.00                |
| <b>Hold: 9.49° Inc, 10.65° Azm</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 2,700.00                           | 9.49            | 10.65       | 2,697.48            | 42.66      | 8.02       | -42.39                | 0.00                  | 0.00                 | 0.00                |
| 2,800.00                           | 9.49            | 10.65       | 2,796.12            | 58.87      | 11.07      | -58.49                | 0.00                  | 0.00                 | 0.00                |
| 2,900.00                           | 9.49            | 10.65       | 2,894.75            | 75.08      | 14.12      | -74.59                | 0.00                  | 0.00                 | 0.00                |
| 3,000.00                           | 9.49            | 10.65       | 2,993.38            | 91.29      | 17.16      | -90.69                | 0.00                  | 0.00                 | 0.00                |
| 3,100.00                           | 9.49            | 10.65       | 3,092.01            | 107.49     | 20.21      | -106.79               | 0.00                  | 0.00                 | 0.00                |
| 3,200.00                           | 9.49            | 10.65       | 3,190.64            | 123.70     | 23.26      | -122.89               | 0.00                  | 0.00                 | 0.00                |
| 3,300.00                           | 9.49            | 10.65       | 3,289.27            | 139.91     | 26.31      | -138.99               | 0.00                  | 0.00                 | 0.00                |
| 3,400.00                           | 9.49            | 10.65       | 3,387.90            | 156.11     | 29.35      | -155.10               | 0.00                  | 0.00                 | 0.00                |
| 3,500.00                           | 9.49            | 10.65       | 3,486.53            | 172.32     | 32.40      | -171.20               | 0.00                  | 0.00                 | 0.00                |
| 3,600.00                           | 9.49            | 10.65       | 3,585.16            | 188.53     | 35.45      | -187.30               | 0.00                  | 0.00                 | 0.00                |
| 3,674.86                           | 9.49            | 10.65       | 3,659.00            | 200.66     | 37.73      | -199.35               | 0.00                  | 0.00                 | 0.00                |
| <b>Parkman</b>                     |                 |             |                     |            |            |                       |                       |                      |                     |
| 3,700.00                           | 9.49            | 10.65       | 3,683.79            | 204.74     | 38.50      | -203.40               | 0.00                  | 0.00                 | 0.00                |
| 3,800.00                           | 9.49            | 10.65       | 3,782.42            | 220.94     | 41.54      | -219.50               | 0.00                  | 0.00                 | 0.00                |
| 3,900.00                           | 9.49            | 10.65       | 3,881.05            | 237.15     | 44.59      | -235.60               | 0.00                  | 0.00                 | 0.00                |
| 4,000.00                           | 9.49            | 10.65       | 3,979.69            | 253.36     | 47.64      | -251.71               | 0.00                  | 0.00                 | 0.00                |
| 4,100.00                           | 9.49            | 10.65       | 4,078.32            | 269.56     | 50.69      | -267.81               | 0.00                  | 0.00                 | 0.00                |

# Noble Energy, Inc.

## Planning Report

|                  |                            |                                     |                         |
|------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDMP                       | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Company:</b>  | Northern Region - DJ Basin | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Project:</b>  | Mustang                    | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site:</b>     | CC Section 29              | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Guttersen CC32-765         |                                     |                         |
| <b>Design:</b>   | Plan #1                    |                                     |                         |

| 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                                | 9.49            | 10.65       | 4,176.95            | 285.77     | 53.73      | -283.91               | 0.00                  | 0.00                 | 0.00                |  |
| 4,296.37                                | 9.49            | 10.65       | 4,272.00            | 301.39     | 56.67      | -299.43               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Sussex</b>                           |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 4,300.00                                | 9.49            | 10.65       | 4,275.58            | 301.98     | 56.78      | -300.01               | 0.00                  | 0.00                 | 0.00                |  |
| 4,400.00                                | 9.49            | 10.65       | 4,374.21            | 318.19     | 59.83      | -316.11               | 0.00                  | 0.00                 | 0.00                |  |
| 4,500.00                                | 9.49            | 10.65       | 4,472.84            | 334.39     | 62.88      | -332.21               | 0.00                  | 0.00                 | 0.00                |  |
| 4,600.00                                | 9.49            | 10.65       | 4,571.47            | 350.60     | 65.92      | -348.31               | 0.00                  | 0.00                 | 0.00                |  |
| 4,700.00                                | 9.49            | 10.65       | 4,670.10            | 366.81     | 68.97      | -364.42               | 0.00                  | 0.00                 | 0.00                |  |
| 4,800.00                                | 9.49            | 10.65       | 4,768.73            | 383.01     | 72.02      | -380.52               | 0.00                  | 0.00                 | 0.00                |  |
| 4,900.00                                | 9.49            | 10.65       | 4,867.36            | 399.22     | 75.07      | -396.62               | 0.00                  | 0.00                 | 0.00                |  |
| 4,931.06                                | 9.49            | 10.65       | 4,898.00            | 404.26     | 76.01      | -401.62               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Shannon</b>                          |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 5,000.00                                | 9.49            | 10.65       | 4,965.99            | 415.43     | 78.11      | -412.72               | 0.00                  | 0.00                 | 0.00                |  |
| 5,100.00                                | 9.49            | 10.65       | 5,064.62            | 431.64     | 81.16      | -428.82               | 0.00                  | 0.00                 | 0.00                |  |
| 5,200.00                                | 9.49            | 10.65       | 5,163.26            | 447.84     | 84.21      | -444.92               | 0.00                  | 0.00                 | 0.00                |  |
| 5,300.00                                | 9.49            | 10.65       | 5,261.89            | 464.05     | 87.26      | -461.03               | 0.00                  | 0.00                 | 0.00                |  |
| 5,400.00                                | 9.49            | 10.65       | 5,360.52            | 480.26     | 90.30      | -477.13               | 0.00                  | 0.00                 | 0.00                |  |
| 5,500.00                                | 9.49            | 10.65       | 5,459.15            | 496.46     | 93.35      | -493.23               | 0.00                  | 0.00                 | 0.00                |  |
| 5,600.00                                | 9.49            | 10.65       | 5,557.78            | 512.67     | 96.40      | -509.33               | 0.00                  | 0.00                 | 0.00                |  |
| 5,700.00                                | 9.49            | 10.65       | 5,656.41            | 528.88     | 99.45      | -525.43               | 0.00                  | 0.00                 | 0.00                |  |
| 5,800.00                                | 9.49            | 10.65       | 5,755.04            | 545.09     | 102.49     | -541.53               | 0.00                  | 0.00                 | 0.00                |  |
| 5,877.01                                | 9.49            | 10.65       | 5,831.00            | 557.57     | 104.84     | -553.93               | 0.00                  | 0.00                 | 0.00                |  |
| <b>Teepee Buttes</b>                    |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 5,900.22                                | 9.49            | 10.65       | 5,853.88            | 561.33     | 105.55     | -557.67               | 0.00                  | 0.00                 | 0.00                |  |
| <b>KOP: Build 9°/100' @ 5900.22' MD</b> |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 5,950.00                                | 5.18            | 20.65       | 5,903.25            | 567.47     | 107.10     | -563.76               | 9.00                  | -8.66                | 20.09               |  |
| 6,000.00                                | 1.92            | 79.60       | 5,953.16            | 569.73     | 108.72     | -565.97               | 9.00                  | -6.51                | 117.89              |  |
| 6,050.00                                | 4.59            | 154.84      | 6,003.09            | 568.07     | 110.40     | -564.26               | 9.00                  | 5.33                 | 150.49              |  |
| 6,100.00                                | 8.88            | 166.98      | 6,052.74            | 562.50     | 112.12     | -558.63               | 9.00                  | 8.59                 | 24.28               |  |
| 6,150.00                                | 13.31           | 171.17      | 6,101.79            | 553.05     | 113.87     | -549.13               | 9.00                  | 8.86                 | 8.38                |  |
| 6,200.00                                | 17.78           | 173.29      | 6,149.95            | 539.77     | 115.65     | -535.80               | 9.00                  | 8.93                 | 4.24                |  |
| 6,250.00                                | 22.26           | 174.58      | 6,196.92            | 522.76     | 117.44     | -518.74               | 9.00                  | 8.96                 | 2.57                |  |
| 6,300.00                                | 26.74           | 175.45      | 6,242.41            | 502.11     | 119.22     | -498.04               | 9.00                  | 8.97                 | 1.75                |  |
| 6,350.00                                | 31.23           | 176.09      | 6,286.13            | 477.95     | 121.00     | -473.84               | 9.00                  | 8.98                 | 1.28                |  |
| 6,400.00                                | 35.72           | 176.58      | 6,327.83            | 450.43     | 122.76     | -446.28               | 9.00                  | 8.98                 | 0.98                |  |
| 6,450.00                                | 40.22           | 176.98      | 6,367.23            | 419.73     | 124.48     | -415.54               | 9.00                  | 8.99                 | 0.79                |  |
| 6,500.00                                | 44.71           | 177.30      | 6,404.11            | 386.02     | 126.16     | -381.79               | 9.00                  | 8.99                 | 0.66                |  |
| 6,550.00                                | 49.21           | 177.58      | 6,438.23            | 349.53     | 127.78     | -345.26               | 9.00                  | 8.99                 | 0.56                |  |
| 6,600.00                                | 53.70           | 177.83      | 6,469.38            | 310.46     | 129.35     | -306.17               | 9.00                  | 8.99                 | 0.49                |  |
| 6,614.80                                | 55.03           | 177.89      | 6,478.00            | 298.44     | 129.79     | -294.14               | 9.00                  | 8.99                 | 0.45                |  |
| <b>Sharon Springs</b>                   |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,650.00                                | 58.20           | 178.04      | 6,497.37            | 269.07     | 130.84     | -264.75               | 9.00                  | 8.99                 | 0.43                |  |
| 6,660.84                                | 59.17           | 178.09      | 6,503.00            | 259.82     | 131.15     | -255.50               | 9.00                  | 8.99                 | 0.41                |  |
| <b>Top A Chalk</b>                      |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,691.34                                | 61.92           | 178.21      | 6,518.00            | 233.27     | 132.01     | -228.94               | 9.00                  | 8.99                 | 0.39                |  |
| <b>Top A Marl</b>                       |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,700.00                                | 62.69           | 178.24      | 6,522.02            | 225.61     | 132.24     | -221.27               | 9.00                  | 8.99                 | 0.38                |  |
| 6,744.40                                | 66.69           | 178.40      | 6,541.00            | 185.50     | 133.42     | -181.14               | 9.00                  | 8.99                 | 0.36                |  |
| <b>Top B Chalk</b>                      |                 |             |                     |            |            |                       |                       |                      |                     |  |
| 6,750.00                                | 67.19           | 178.42      | 6,543.19            | 180.35     | 133.56     | -175.99               | 9.00                  | 8.99                 | 0.35                |  |
| 6,800.00                                | 71.69           | 178.59      | 6,560.75            | 133.56     | 134.78     | -129.19               | 9.00                  | 8.99                 | 0.34                |  |
| 6,850.00                                | 76.19           | 178.76      | 6,574.58            | 85.54      | 135.89     | -81.15                | 9.00                  | 8.99                 | 0.32                |  |
| 6,900.00                                | 80.68           | 178.91      | 6,584.60            | 36.58      | 136.88     | -32.18                | 9.00                  | 8.99                 | 0.31                |  |

# Noble Energy, Inc.

## Planning Report

|                  |                            |                                     |                         |
|------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDMP                       | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Company:</b>  | Northern Region - DJ Basin | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Project:</b>  | Mustang                    | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site:</b>     | CC Section 29              | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Guttersen CC32-765         |                                     |                         |
| <b>Design:</b>   | Plan #1                    |                                     |                         |

| 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) |
| 6,932.12  | 83.57           | 179.01      | 6,589.00            | 4.77       | 137.46     | -0.37                 | 9.00                  | 8.99                 | 0.30                |
| <b>Top B Marl</b>                               |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,950.00  | 85.18           | 179.06      | 6,590.75            | -13.02     | 137.76     | 17.42                 | 9.00                  | 9.00                 | 0.30                |
| 7,003.58  | 90.00           | 179.22      | 6,593.00            | -66.53     | 138.56     | 70.92                 | 9.00                  | 9.00                 | 0.30                |
| <b>LP: 7003.57' MD, 90.00° Inc, 179.22° Azm</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,100.00  | 90.00           | 179.22      | 6,593.00            | -162.95    | 139.87     | 167.33                | 0.00                  | 0.00                 | 0.00                |
| 7,200.00  | 90.00           | 179.22      | 6,593.00            | -262.94    | 141.23     | 267.31                | 0.00                  | 0.00                 | 0.00                |
| 7,300.00  | 90.00           | 179.22      | 6,593.00            | -362.93    | 142.59     | 367.30                | 0.00                  | 0.00                 | 0.00                |
| 7,400.00  | 90.00           | 179.22      | 6,593.00            | -462.92    | 143.95     | 467.28                | 0.00                  | 0.00                 | 0.00                |
| 7,500.00  | 90.00           | 179.22      | 6,593.00            | -562.91    | 145.30     | 567.26                | 0.00                  | 0.00                 | 0.00                |
| 7,600.00  | 90.00           | 179.22      | 6,593.00            | -662.90    | 146.66     | 667.25                | 0.00                  | 0.00                 | 0.00                |
| 7,700.00  | 90.00           | 179.22      | 6,593.00            | -762.89    | 148.02     | 767.23                | 0.00                  | 0.00                 | 0.00                |
| 7,800.00  | 90.00           | 179.22      | 6,593.00            | -862.88    | 149.38     | 867.21                | 0.00                  | 0.00                 | 0.00                |
| 7,900.00  | 90.00           | 179.22      | 6,593.00            | -962.87    | 150.74     | 967.20                | 0.00                  | 0.00                 | 0.00                |
| 8,000.00  | 90.00           | 179.22      | 6,593.00            | -1,062.86  | 152.09     | 1,067.18              | 0.00                  | 0.00                 | 0.00                |
| 8,100.00  | 90.00           | 179.22      | 6,593.00            | -1,162.85  | 153.45     | 1,167.16              | 0.00                  | 0.00                 | 0.00                |
| 8,200.00  | 90.00           | 179.22      | 6,593.00            | -1,262.84  | 154.81     | 1,267.15              | 0.00                  | 0.00                 | 0.00                |
| 8,300.00  | 90.00           | 179.22      | 6,593.00            | -1,362.83  | 156.17     | 1,367.13              | 0.00                  | 0.00                 | 0.00                |
| 8,400.00  | 90.00           | 179.22      | 6,593.00            | -1,462.83  | 157.53     | 1,467.11              | 0.00                  | 0.00                 | 0.00                |
| 8,500.00  | 90.00           | 179.22      | 6,593.00            | -1,562.82  | 158.89     | 1,567.10              | 0.00                  | 0.00                 | 0.00                |
| 8,600.00  | 90.00           | 179.22      | 6,593.00            | -1,662.81  | 160.24     | 1,667.08              | 0.00                  | 0.00                 | 0.00                |
| 8,700.00  | 90.00           | 179.22      | 6,593.00            | -1,762.80  | 161.60     | 1,767.06              | 0.00                  | 0.00                 | 0.00                |
| 8,800.00  | 90.00           | 179.22      | 6,593.00            | -1,862.79  | 162.96     | 1,867.04              | 0.00                  | 0.00                 | 0.00                |
| 8,900.00  | 90.00           | 179.22      | 6,593.00            | -1,962.78  | 164.32     | 1,967.03              | 0.00                  | 0.00                 | 0.00                |
| 9,000.00  | 90.00           | 179.22      | 6,593.00            | -2,062.77  | 165.68     | 2,067.01              | 0.00                  | 0.00                 | 0.00                |
| 9,100.00  | 90.00           | 179.22      | 6,593.00            | -2,162.76  | 167.03     | 2,166.99              | 0.00                  | 0.00                 | 0.00                |
| 9,200.00  | 90.00           | 179.22      | 6,593.00            | -2,262.75  | 168.39     | 2,266.98              | 0.00                  | 0.00                 | 0.00                |
| 9,300.00  | 90.00           | 179.22      | 6,593.00            | -2,362.74  | 169.75     | 2,366.96              | 0.00                  | 0.00                 | 0.00                |
| 9,400.00  | 90.00           | 179.22      | 6,593.00            | -2,462.73  | 171.11     | 2,466.94              | 0.00                  | 0.00                 | 0.00                |
| 9,500.00  | 90.00           | 179.22      | 6,593.00            | -2,562.72  | 172.47     | 2,566.93              | 0.00                  | 0.00                 | 0.00                |
| 9,600.00  | 90.00           | 179.22      | 6,593.00            | -2,662.71  | 173.82     | 2,666.91              | 0.00                  | 0.00                 | 0.00                |
| 9,700.00  | 90.00           | 179.22      | 6,593.00            | -2,762.71  | 175.18     | 2,766.89              | 0.00                  | 0.00                 | 0.00                |
| 9,800.00  | 90.00           | 179.22      | 6,593.00            | -2,862.70  | 176.54     | 2,866.88              | 0.00                  | 0.00                 | 0.00                |
| 9,900.00  | 90.00           | 179.22      | 6,593.00            | -2,962.69  | 177.90     | 2,966.86              | 0.00                  | 0.00                 | 0.00                |
| 10,000.00                                       | 90.00           | 179.22      | 6,593.00            | -3,062.68  | 179.26     | 3,066.84              | 0.00                  | 0.00                 | 0.00                |
| 10,100.00                                       | 90.00           | 179.22      | 6,593.00            | -3,162.67  | 180.61     | 3,166.83              | 0.00                  | 0.00                 | 0.00                |
| 10,200.00                                       | 90.00           | 179.22      | 6,593.00            | -3,262.66  | 181.97     | 3,266.81              | 0.00                  | 0.00                 | 0.00                |
| 10,300.00                                       | 90.00           | 179.22      | 6,593.00            | -3,362.65  | 183.33     | 3,366.79              | 0.00                  | 0.00                 | 0.00                |
| 10,400.00                                       | 90.00           | 179.22      | 6,593.00            | -3,462.64  | 184.69     | 3,466.77              | 0.00                  | 0.00                 | 0.00                |
| 10,500.00                                       | 90.00           | 179.22      | 6,593.00            | -3,562.63  | 186.05     | 3,566.76              | 0.00                  | 0.00                 | 0.00                |
| 10,600.00                                       | 90.00           | 179.22      | 6,593.00            | -3,662.62  | 187.41     | 3,666.74              | 0.00                  | 0.00                 | 0.00                |
| 10,700.00                                       | 90.00           | 179.22      | 6,593.00            | -3,762.61  | 188.76     | 3,766.72              | 0.00                  | 0.00                 | 0.00                |
| 10,800.00                                       | 90.00           | 179.22      | 6,593.00            | -3,862.60  | 190.12     | 3,866.71              | 0.00                  | 0.00                 | 0.00                |
| 10,900.00                                       | 90.00           | 179.22      | 6,593.00            | -3,962.59  | 191.48     | 3,966.69              | 0.00                  | 0.00                 | 0.00                |
| 11,000.00                                       | 90.00           | 179.22      | 6,593.00            | -4,062.59  | 192.84     | 4,066.67              | 0.00                  | 0.00                 | 0.00                |
| 11,100.00                                       | 90.00           | 179.22      | 6,593.00            | -4,162.58  | 194.20     | 4,166.66              | 0.00                  | 0.00                 | 0.00                |
| 11,200.00                                       | 90.00           | 179.22      | 6,593.00            | -4,262.57  | 195.55     | 4,266.64              | 0.00                  | 0.00                 | 0.00                |
| 11,300.00                                       | 90.00           | 179.22      | 6,593.00            | -4,362.56  | 196.91     | 4,366.62              | 0.00                  | 0.00                 | 0.00                |
| 11,400.00                                       | 90.00           | 179.22      | 6,593.00            | -4,462.55  | 198.27     | 4,466.61              | 0.00                  | 0.00                 | 0.00                |
| 11,500.00                                       | 90.00           | 179.22      | 6,593.00            | -4,562.54  | 199.63     | 4,566.59              | 0.00                  | 0.00                 | 0.00                |
| 11,600.00                                       | 90.00           | 179.22      | 6,593.00            | -4,662.53  | 200.99     | 4,666.57              | 0.00                  | 0.00                 | 0.00                |
| 11,700.00                                       | 90.00           | 179.22      | 6,593.00            | -4,762.52  | 202.34     | 4,766.55              | 0.00                  | 0.00                 | 0.00                |
| 11,800.00                                       | 90.00           | 179.22      | 6,593.00            | -4,862.51  | 203.70     | 4,866.54              | 0.00                  | 0.00                 | 0.00                |
| 11,900.00                                       | 90.00           | 179.22      | 6,593.00            | -4,962.50  | 205.06     | 4,966.52              | 0.00                  | 0.00                 | 0.00                |

# Noble Energy, Inc.

## Planning Report

|                  |                            |                                     |                         |
|------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDMP                       | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Company:</b>  | Northern Region - DJ Basin | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Project:</b>  | Mustang                    | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site:</b>     | CC Section 29              | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Guttersen CC32-765         |                                     |                         |
| <b>Design:</b>   | Plan #1                    |                                     |                         |

| 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) |
| 12,000.00                      | 90.00           | 179.22      | 6,593.00            | -5,062.49  | 206.42     | 5,066.50              | 0.00                  | 0.00                 | 0.00                |
| 12,100.00                      | 90.00           | 179.22      | 6,593.00            | -5,162.48  | 207.78     | 5,166.49              | 0.00                  | 0.00                 | 0.00                |
| 12,200.00                      | 90.00           | 179.22      | 6,593.00            | -5,262.48  | 209.14     | 5,266.47              | 0.00                  | 0.00                 | 0.00                |
| 12,300.00                      | 90.00           | 179.22      | 6,593.00            | -5,362.47  | 210.49     | 5,366.45              | 0.00                  | 0.00                 | 0.00                |
| 12,400.00                      | 90.00           | 179.22      | 6,593.00            | -5,462.46  | 211.85     | 5,466.44              | 0.00                  | 0.00                 | 0.00                |
| 12,500.00                      | 90.00           | 179.22      | 6,593.00            | -5,562.45  | 213.21     | 5,566.42              | 0.00                  | 0.00                 | 0.00                |
| 12,600.00                      | 90.00           | 179.22      | 6,593.00            | -5,662.44  | 214.57     | 5,666.40              | 0.00                  | 0.00                 | 0.00                |
| 12,700.00                      | 90.00           | 179.22      | 6,593.00            | -5,762.43  | 215.93     | 5,766.39              | 0.00                  | 0.00                 | 0.00                |
| 12,800.00                      | 90.00           | 179.22      | 6,593.00            | -5,862.42  | 217.28     | 5,866.37              | 0.00                  | 0.00                 | 0.00                |
| 12,900.00                      | 90.00           | 179.22      | 6,593.00            | -5,962.41  | 218.64     | 5,966.35              | 0.00                  | 0.00                 | 0.00                |
| 13,000.00                      | 90.00           | 179.22      | 6,593.00            | -6,062.40  | 220.00     | 6,066.34              | 0.00                  | 0.00                 | 0.00                |
| 13,100.00                      | 90.00           | 179.22      | 6,593.00            | -6,162.39  | 221.36     | 6,166.32              | 0.00                  | 0.00                 | 0.00                |
| 13,200.00                      | 90.00           | 179.22      | 6,593.00            | -6,262.38  | 222.72     | 6,266.30              | 0.00                  | 0.00                 | 0.00                |
| 13,300.00                      | 90.00           | 179.22      | 6,593.00            | -6,362.37  | 224.07     | 6,366.28              | 0.00                  | 0.00                 | 0.00                |
| 13,400.00                      | 90.00           | 179.22      | 6,593.00            | -6,462.36  | 225.43     | 6,466.27              | 0.00                  | 0.00                 | 0.00                |
| 13,500.00                      | 90.00           | 179.22      | 6,593.00            | -6,562.36  | 226.79     | 6,566.25              | 0.00                  | 0.00                 | 0.00                |
| 13,600.00                      | 90.00           | 179.22      | 6,593.00            | -6,662.35  | 228.15     | 6,666.23              | 0.00                  | 0.00                 | 0.00                |
| 13,700.00                      | 90.00           | 179.22      | 6,593.00            | -6,762.34  | 229.51     | 6,766.22              | 0.00                  | 0.00                 | 0.00                |
| 13,800.00                      | 90.00           | 179.22      | 6,593.00            | -6,862.33  | 230.87     | 6,866.20              | 0.00                  | 0.00                 | 0.00                |
| 13,900.00                      | 90.00           | 179.22      | 6,593.00            | -6,962.32  | 232.22     | 6,966.18              | 0.00                  | 0.00                 | 0.00                |
| 14,000.00                      | 90.00           | 179.22      | 6,593.00            | -7,062.31  | 233.58     | 7,066.17              | 0.00                  | 0.00                 | 0.00                |
| 14,100.00                      | 90.00           | 179.22      | 6,593.00            | -7,162.30  | 234.94     | 7,166.15              | 0.00                  | 0.00                 | 0.00                |
| 14,200.00                      | 90.00           | 179.22      | 6,593.00            | -7,262.29  | 236.30     | 7,266.13              | 0.00                  | 0.00                 | 0.00                |
| 14,300.00                      | 90.00           | 179.22      | 6,593.00            | -7,362.28  | 237.66     | 7,366.12              | 0.00                  | 0.00                 | 0.00                |
| 14,400.00                      | 90.00           | 179.22      | 6,593.00            | -7,462.27  | 239.01     | 7,466.10              | 0.00                  | 0.00                 | 0.00                |
| 14,424.35                      | 90.00           | 179.22      | 6,593.00            | -7,486.62  | 239.34     | 7,490.44              | 0.00                  | 0.00                 | 0.00                |
| TD @ 14424.35' MD/6593.00' TVD |                 |             |                     |            |            |                       |                       |                      |                     |

| Design Targets  |               |              |          |            |            |                 |                |            |              |
|---|---------------|--------------|----------|------------|------------|-----------------|----------------|------------|--------------|
| Target Name   | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (usft) | Easting (usft) | Latitude   | Longitude    |
| Guttersen CC32-765-<br>- hit/miss target<br>- plan hits target center<br>- Shape<br>- Point | 0.00          | 0.00         | 0.00     | 0.00       | 0.00       | 1,347,598.54    | 3,288,561.94   | 40.2829380 | -104.4656720 |
| Guttersen CC32-765-<br>- hit/miss target<br>- plan hits target center<br>- Shape<br>- Point | 0.00          | 0.01         | 5,853.89 | 561.33     | 105.55     | 1,348,159.86    | 3,288,667.49   | 40.2844754 | -104.4652702 |
| Guttersen CC32-765-<br>- hit/miss target<br>- plan hits target center<br>- Shape<br>- Point | 0.00          | 0.01         | 6,593.00 | -66.53     | 138.56     | 1,347,532.01    | 3,288,700.50   | 40.2827510 | -104.4651781 |
| Guttersen CC32-765-<br>- hit/miss target<br>- plan hits target center<br>- Shape<br>- Point | 0.00          | 0.00         | 6,593.00 | -7,486.62  | 239.34     | 1,340,111.93    | 3,288,801.28   | 40.2623804 | -104.4651273 |

**Noble Energy, Inc.**  
Planning Report

|                  |                            |                                     |                         |
|------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Database:</b> | EDMP                       | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Company:</b>  | Northern Region - DJ Basin | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Project:</b>  | Mustang                    | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site:</b>     | CC Section 29              | <b>North Reference:</b>             | Grid                    |
| <b>Well:</b>     | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Wellbore:</b> | Guttersen CC32-765         |                                     |                         |
| <b>Design:</b>   | Plan #1                    |                                     |                         |

| Formations          |                     |                           |           |         |                   |  |
|---------------------|---------------------|---------------------------|-----------|---------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name                      | Lithology | Dip (°) | Dip Direction (°) |  |
| 65.00               | 65.00               | Upper Pierre Aquifer Top  |           |         |                   |  |
| 401.00              | 401.00              | Pierre                    |           |         |                   |  |
| 1,603.00            | 1,603.00            | Upper Pierre Aquifer Base |           |         |                   |  |
| 3,674.86            | 3,659.00            | Parkman                   |           |         |                   |  |
| 4,296.37            | 4,272.00            | Sussex                    |           |         |                   |  |
| 4,931.06            | 4,898.00            | Shannon                   |           |         |                   |  |
| 5,877.01            | 5,831.00            | Teepee Buttes             |           |         |                   |  |
| 6,614.80            | 6,478.00            | Sharon Springs            |           |         |                   |  |
| 6,660.84            | 6,503.00            | Top A Chalk               |           |         |                   |  |
| 6,691.34            | 6,518.00            | Top A Marl                |           |         |                   |  |
| 6,744.40            | 6,541.00            | Top B Chalk               |           |         |                   |  |
| 6,932.12            | 6,589.00            | Top B Marl                |           |         |                   |  |

| Plan Annotations    |                     |                   |            |  |  |
|---------------------|---------------------|-------------------|------------|--|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates |            |  |  |
|                     |                     | +N/-S (ft)        | +E/-W (ft) | Comment                                  |  |
| 2,200.00            | 2,200.00            | 0.00              | 0.00       | Build: 2°/100'                           |  |
| 2,674.61            | 2,672.44            | 38.55             | 7.25       | Hold: 9.49° Inc, 10.65° Azm              |  |
| 5,900.22            | 5,853.88            | 561.33            | 105.55     | KOP: Build 9°/100' @ 5900.22' MD         |  |
| 7,003.58            | 6,593.00            | -66.53            | 138.56     | LP: 7003.57' MD, 90.00° Inc, 179.22° Azm |  |
| 14,424.35           | 6,593.00            | -7,486.62         | 239.34     | TD @ 14424.35' MD/6593.00' TVD           |  |



# **Northern Region - DJ Basin**

**Mustang**

**CC Section 29**

**Guttersen CC32-765**

**Guttersen CC32-765**

**Plan #1**

## **Anticollision Summary Report**

**15 October, 2018**

# Noble Energy, Inc.

## Anticollision Summary Report

|                           |                            |                                     |                         |
|---------------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | Northern Region - DJ Basin | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Project:</b>           | Mustang                    | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Reference Site:</b>    | CC Section 29              | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site Error:</b>        | 0.00 ft                    | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.00 ft                    | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Guttersen CC32-765         | <b>Database:</b>                    | EDMP                    |
| <b>Reference Design:</b>  | Plan #1                    | <b>Offset TVD Reference:</b>        | 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                         | 10/15/2018    |  |  |
|---------------------|-----------|------------------------------|---------------|--|--|
| From (ft)           | To (ft)   | Survey (Wellbore)            | Tool Name     | Description                              |  |
| 0.00                | 14,424.35 | Plan #1 (Guttersen CC32-765) | 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             |
| Offset Well - Wellbore - Design                   |                               |                            |                               |                                |                   |                     |
| CC Section 29                                     |                               |                            |                               |                                |                   |                     |
| GUTTERSEN #13-29U(PA) - Wellbore #1 - Gyro        | 7,466.66                      | 6,617.84                   | 984.50                        | 937.57                         | 20.981            | CC, ES              |
| GUTTERSEN #13-29U(PA) - Wellbore #1 - Gyro        | 7,500.00                      | 6,617.89                   | 985.06                        | 938.08                         | 20.968            | SF                  |
| GUTTERSEN #14-29U(PR) - Wellbore #1 - Gyro        | 8,745.27                      | 6,579.54                   | 953.42                        | 902.05                         | 18.560            | CC, ES              |
| GUTTERSEN #14-29U(PR) - Wellbore #1 - Gyro        | 8,800.00                      | 6,578.97                   | 954.99                        | 903.41                         | 18.514            | SF                  |
| GUTTERSEN #23-29U(PR) - Wellbore #1 - Gyro        | 7,472.04                      | 6,564.98                   | 254.08                        | 207.30                         | 5.431             | CC, ES, SF          |
| GUTTERSEN #24-29U(PR) - Wellbore #1 - Gyro        | 8,812.33                      | 6,571.51                   | 253.70                        | 202.04                         | 4.910             | CC, ES, SF          |
| GUTTERSEN #29-BU(PR) - Wellbore #1 - Gyro         | 8,094.26                      | 6,588.17                   | 382.46                        | 333.81                         | 7.862             | CC, ES              |
| GUTTERSEN #29-BU(PR) - Wellbore #1 - Gyro         | 8,100.00                      | 6,588.18                   | 382.50                        | 333.84                         | 7.861             | SF                  |
| GUTTERSEN #29PU(PR) - Wellbore #1 - Gyro          | 8,075.13                      | 6,578.05                   | 865.02                        | 816.50                         | 17.827            | CC, ES              |
| GUTTERSEN #29PU(PR) - Wellbore #1 - Gyro          | 8,100.00                      | 6,577.64                   | 865.38                        | 816.76                         | 17.801            | SF                  |
| GUTTERSEN #33-29U(PR) - Wellbore #1 - Gyro        | 7,427.91                      | 6,568.13                   | 1,554.47                      | 1,507.76                       | 33.281            | CC, ES              |
| GUTTERSEN #33-29U(PR) - Wellbore #1 - Gyro        | 7,500.00                      | 6,567.89                   | 1,556.14                      | 1,509.28                       | 33.207            | SF                  |
| GUTTERSEN #43-29U(PR) - Wellbore #1 - Gyro        | 7,498.48                      | 6,517.57                   | 2,849.47                      | 2,802.82                       | 61.072            | CC                  |
| GUTTERSEN #43-29U(PR) - Wellbore #1 - Gyro        | 7,500.00                      | 6,517.57                   | 2,849.47                      | 2,802.81                       | 61.067            | ES                  |
| GUTTERSEN #43-29U(PR) - Wellbore #1 - Gyro        | 8,100.00                      | 6,514.58                   | 2,912.27                      | 2,863.90                       | 60.211            | SF                  |
| GUTTERSEN #44-29U(PR) - Wellbore #1 - Gyro        | 8,753.86                      | 6,728.65                   | 2,935.30                      | 2,883.44                       | 56.601            | CC, ES              |
| GUTTERSEN #44-29U(PR) - Wellbore #1 - Gyro        | 9,500.00                      | 6,739.85                   | 3,028.63                      | 2,973.13                       | 54.567            | SF                  |
| Guttersen CC32-717 - Guttersen CC32-717 - Plan #1 | 2,112.55                      | 2,123.55                   | 2,429.91                      | 2,415.19                       | 165.084           | CC                  |
| Guttersen CC32-717 - Guttersen CC32-717 - Plan #1 | 2,200.00                      | 2,200.00                   | 2,429.93                      | 2,414.63                       | 158.751           | ES                  |
| Guttersen CC32-717 - Guttersen CC32-717 - Plan #1 | 14,424.35                     | 14,521.56                  | 3,154.92                      | 3,019.78                       | 23.346            | SF                  |
| Guttersen CC32-725 - Guttersen CC32-725 - Plan #1 | 2,200.00                      | 2,210.00                   | 2,407.31                      | 2,391.96                       | 156.904           | CC                  |
| Guttersen CC32-725 - Guttersen CC32-725 - Plan #1 | 2,400.00                      | 2,360.97                   | 2,408.15                      | 2,391.56                       | 145.152           | ES                  |
| Guttersen CC32-725 - Guttersen CC32-725 - Plan #1 | 14,424.35                     | 14,525.23                  | 2,616.47                      | 2,481.48                       | 19.382            | SF                  |
| Guttersen CC32-730 - Guttersen CC32-730 - Plan #1 | 6,881.65                      | 7,024.48                   | 2,261.15                      | 2,214.29                       | 48.249            | CC                  |
| Guttersen CC32-730 - Guttersen CC32-730 - Plan #1 | 14,424.35                     | 14,599.42                  | 2,293.44                      | 2,158.42                       | 16.987            | ES, SF              |
| Guttersen CC32-735 - Guttersen CC32-735 - Plan #1 | 6,963.93                      | 6,981.15                   | 1,934.44                      | 1,887.84                       | 41.511            | CC                  |
| Guttersen CC32-735 - Guttersen CC32-735 - Plan #1 | 14,424.35                     | 14,436.54                  | 1,962.14                      | 1,827.19                       | 14.539            | ES, SF              |
| Guttersen CC32-745 - Guttersen CC32-745 - Plan #1 | 6,991.10                      | 7,195.39                   | 1,292.05                      | 1,244.29                       | 27.052            | CC                  |
| Guttersen CC32-745 - Guttersen CC32-745 - Plan #1 | 14,424.35                     | 14,627.60                  | 1,310.46                      | 1,174.94                       | 9.670             | ES, SF              |
| Guttersen CC32-750 - Guttersen CC32-750 - Plan #1 | 2,200.00                      | 2,200.00                   | 45.20                         | 29.89                          | 2.953             | CC, ES              |
| Guttersen CC32-750 - Guttersen CC32-750 - Plan #1 | 2,300.00                      | 2,298.69                   | 46.31                         | 30.30                          | 2.893             | SF                  |
| Guttersen CC32-755 - Guttersen CC32-755 - Plan #1 | 2,200.00                      | 2,200.00                   | 22.60                         | 7.29                           | 1.476             | Level 3, CC, ES     |
| Guttersen CC32-755 - Guttersen CC32-755 - Plan #1 | 2,300.00                      | 2,299.41                   | 23.54                         | 7.53                           | 1.470             | Level 3, SF         |
| Guttersen CC32-775 - Guttersen CC32-775 - Plan #1 | 2,200.00                      | 2,200.00                   | 22.32                         | 7.02                           | 1.458             | Level 3, CC, ES, SF |
| Guttersen CC32-785 - Guttersen CC32-785 - Plan #1 | 2,200.00                      | 2,199.00                   | 44.92                         | 29.62                          | 2.936             | CC, ES              |
| Guttersen CC32-785 - Guttersen CC32-785 - Plan #1 | 2,300.00                      | 2,297.63                   | 46.71                         | 30.71                          | 2.919             | SF                  |
| KILLEYBEGS #1(PR) - Wellbore #1 - No Surveys      | 8,486.58                      | 6,575.00                   | 1,938.56                      | 1,853.83                       | 22.878            | CC                  |

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

**Noble Energy, Inc.**  
Anticollision Summary Report

|                           |                            |                                     |                         |
|---------------------------|----------------------------|-------------------------------------|-------------------------|
| <b>Company:</b>           | Northern Region - DJ Basin | <b>Local Co-ordinate Reference:</b> | Well Guttersen CC32-765 |
| <b>Project:</b>           | Mustang                    | <b>TVD Reference:</b>               | Well @ 4792.00ft        |
| <b>Reference Site:</b>    | CC Section 29              | <b>MD Reference:</b>                | Well @ 4792.00ft        |
| <b>Site Error:</b>        | 0.00 ft                    | <b>North Reference:</b>             | Grid                    |
| <b>Reference Well:</b>    | Guttersen CC32-765         | <b>Survey Calculation Method:</b>   | Minimum Curvature       |
| <b>Well Error:</b>        | 0.00 ft                    | <b>Output errors are at</b>         | 2.00 sigma              |
| <b>Reference Wellbore</b> | Guttersen CC32-765         | <b>Database:</b>                    | EDMP                    |
| <b>Reference Design:</b>  | Plan #1                    | <b>Offset TVD Reference:</b>        | 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                          |                               |                            |                               |                                |                   |            |
| CC Section 29  |                               |                            |                               |                                |                   |            |
| KILLEYBEGS #1(PR) - Wellbore #1 - No Surveys             | 8,500.00                      | 6,575.00                   | 1,938.61                      | 1,853.81                       | 22.863            | ES         |
| KILLEYBEGS #1(PR) - Wellbore #1 - No Surveys             | 8,700.00                      | 6,575.00                   | 1,950.27                      | 1,864.58                       | 22.759            | SF         |
| CC Section 32  |                               |                            |                               |                                |                   |            |
| Guttersen State #CC32-06(PR) - Guttersen State #CC32     | 11,324.81                     | 6,611.00                   | 407.28                        | 230.66                         | 2.306             | CC, ES, SF |
| GUTTERSEN STATE CC #32-03(PR) - GUTTERSEN ST             | 9,904.64                      | 6,588.00                   | 507.35                        | 340.62                         | 3.043             | CC, ES, SF |
| GUTTERSEN STATE CC #32-04(PR) - GUTTERSEN ST             | 10,049.24                     | 6,599.00                   | 1,020.32                      | 852.47                         | 6.079             | CC, ES     |
| GUTTERSEN STATE CC #32-04(PR) - GUTTERSEN ST             | 10,100.00                     | 6,599.00                   | 1,021.58                      | 853.47                         | 6.077             | SF         |
| GUTTERSEN STATE CC #32-11(PR) - GUTTERSEN ST             | 12,771.52                     | 6,602.00                   | 471.23                        | 284.28                         | 2.521             | CC, ES, SF |
| GUTTERSEN STATE CC #32-12(PR) - GUTTERSEN ST             | 12,542.59                     | 6,611.00                   | 1,124.53                      | 939.10                         | 6.064             | CC, ES     |
| GUTTERSEN STATE CC #32-12(PR) - GUTTERSEN ST             | 12,600.00                     | 6,611.00                   | 1,126.00                      | 940.23                         | 6.061             | SF         |
| GUTTERSEN STATE CC #32-5(PR) - GUTTERSEN ST              | 11,264.46                     | 6,602.00                   | 1,042.51                      | 866.49                         | 5.923             | CC, ES     |
| GUTTERSEN STATE CC #32-5(PR) - GUTTERSEN ST              | 11,300.00                     | 6,602.00                   | 1,043.11                      | 866.89                         | 5.919             | SF         |
| Guttersen State CC32-13 - Wellbore #1 - Wellbore #1 - A  | 14,025.26                     | 6,655.52                   | 1,065.33                      | 977.84                         | 12.176            | CC, ES     |
| Guttersen State CC32-13 - Wellbore #1 - Wellbore #1 - A  | 14,100.00                     | 6,657.05                   | 1,067.95                      | 980.06                         | 12.152            | SF         |
| Guttersen State CC32-14 - Wellbore #1 - Wellbore #1 - A  | 14,070.66                     | 6,632.94                   | 165.48                        | 77.71                          | 1.885             | CC, ES, SF |
| STATE #25(PR) - STATE #25 - No Surveys                   | 13,472.64                     | 6,627.00                   | 362.27                        | 169.53                         | 1.880             | CC, ES, SF |
| DD Section 05  |                               |                            |                               |                                |                   |            |
| Guttersen 1N-5HZ - Wellbore #1 - Wellbore #1 - As Drille | 14,424.35                     | 11,271.02                  | 3,235.82                      | 3,083.19                       | 21.200            | CC, ES, SF |
| Guttersen 27N-5HZ - Wellbore #1 - Wellbore #1 - As Dril  | 14,424.35                     | 11,061.02                  | 2,204.55                      | 2,057.18                       | 14.960            | CC, ES, SF |
| Guttersen 2N-5HZ - Wellbore #1 - Wellbore #1 - As Drille | 14,424.35                     | 11,309.02                  | 1,210.65                      | 1,084.47                       | 9.594             | CC, ES, SF |
| Guttersen 3-5HZ - Wellbore #1 - Wellbore #1 - As Drilled | 14,424.35                     | 11,041.02                  | 762.28                        | 711.81                         | 15.104            | CC, ES, SF |
| Guttersen 4-5HZ - Wellbore #1 - Wellbore #1 - As Drilled | 14,424.35                     | 11,205.02                  | 1,289.90                      | 1,147.68                       | 9.070             | CC, ES, SF |
| UPV 05-13J03 - Wellbore #1 - Wellbore #1 - As Drilled    | 14,424.35                     | 6,654.43                   | 4,491.62                      | 4,441.42                       | 89.472            | CC, ES, SF |

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

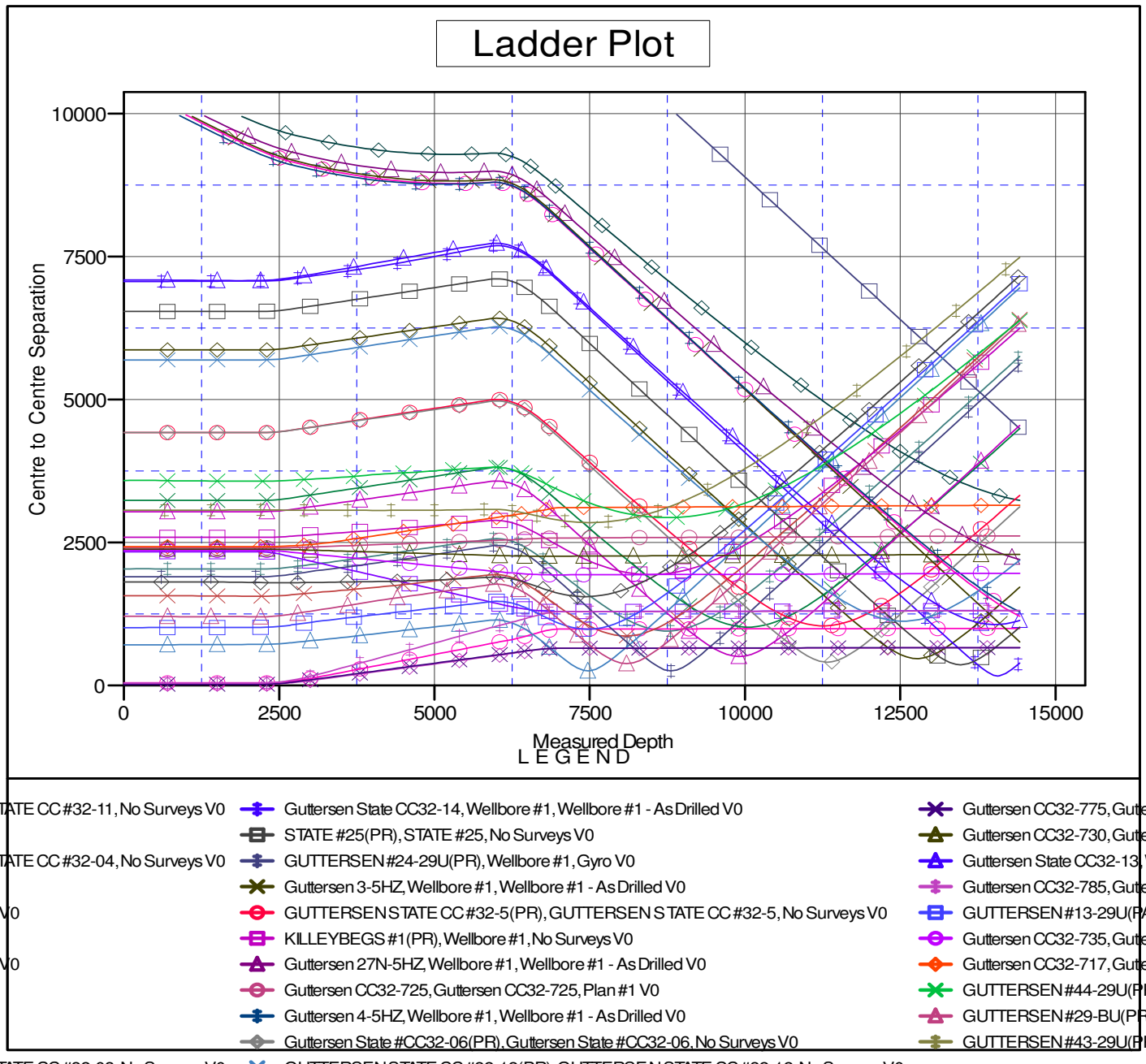
# Noble Energy, Inc.

## Anticollision Summary Report

|                           |                            |                                     |                          |
|---------------------------|----------------------------|-------------------------------------|--------------------------|
| <b>Company:</b>           | Northern Region - DJ Basin | <b>Local Co-ordinate Reference:</b> | Well Guttersten CC32-765 |
| <b>Project:</b>           | Mustang                    | <b>TVD Reference:</b>               | Well @ 4792.00ft         |
| <b>Reference Site:</b>    | CC Section 29              | <b>MD Reference:</b>                | Well @ 4792.00ft         |
| <b>Site Error:</b>        | 0.00 ft                    | <b>North Reference:</b>             | Grid                     |
| <b>Reference Well:</b>    | Guttersten CC32-765        | <b>Survey Calculation Method:</b>   | Minimum Curvature        |
| <b>Well Error:</b>        | 0.00 ft                    | <b>Output errors are at</b>         | 2.00 sigma               |
| <b>Reference Wellbore</b> | Guttersten CC32-765        | <b>Database:</b>                    | EDMP                     |
| <b>Reference Design:</b>  | Plan #1                    | <b>Offset TVD Reference:</b>        | Offset Datum             |

Reference Depths are relative to Well @ 4792.00ft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Guttersten CC32-765  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.67°



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

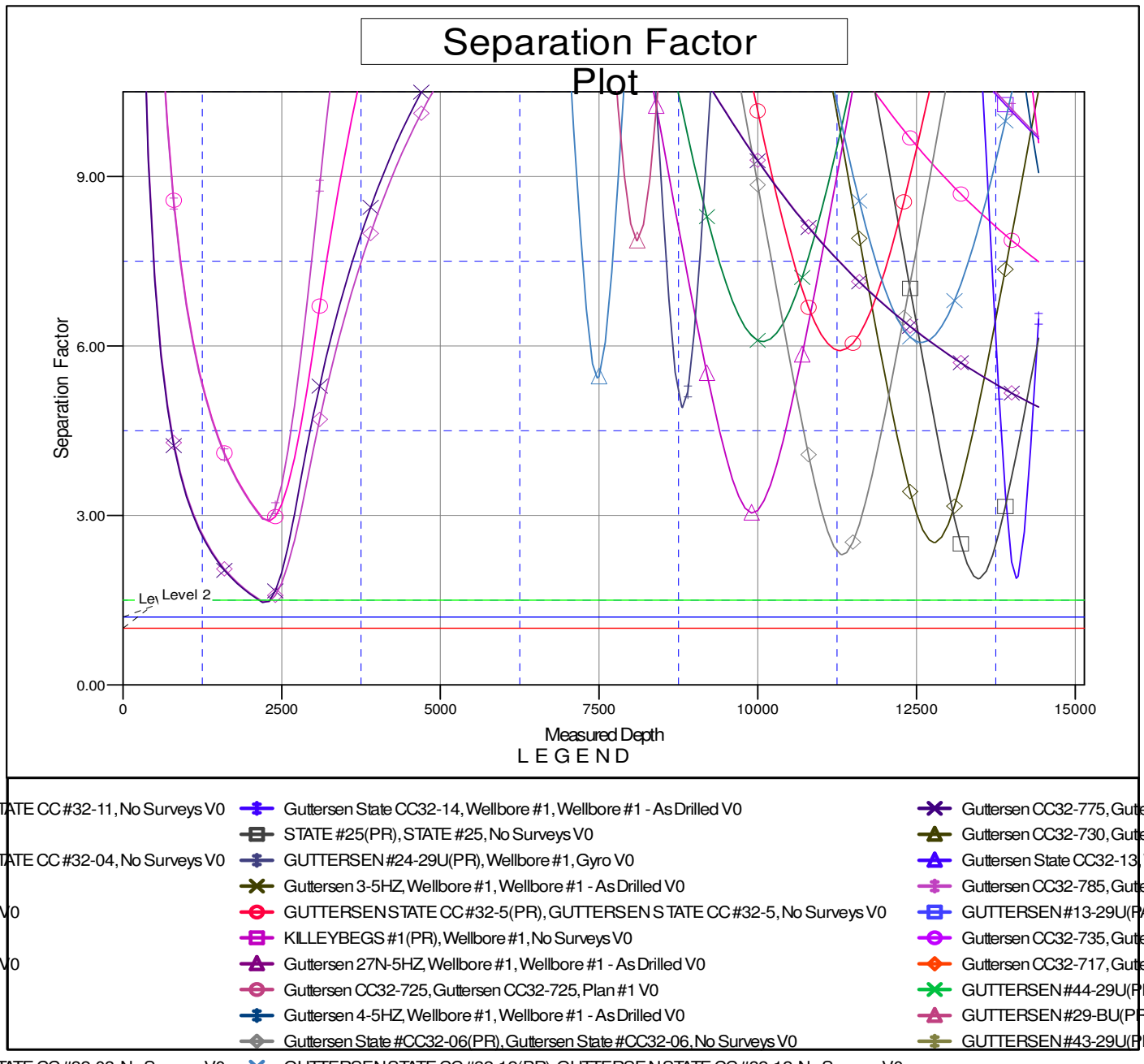
# Noble Energy, Inc.

## Anticollision Summary Report

|                           |                            |                                     |                          |
|---------------------------|----------------------------|-------------------------------------|--------------------------|
| <b>Company:</b>           | Northern Region - DJ Basin | <b>Local Co-ordinate Reference:</b> | Well Gutttersen CC32-765 |
| <b>Project:</b>           | Mustang                    | <b>TVD Reference:</b>               | Well @ 4792.00ft         |
| <b>Reference Site:</b>    | CC Section 29              | <b>MD Reference:</b>                | Well @ 4792.00ft         |
| <b>Site Error:</b>        | 0.00 ft                    | <b>North Reference:</b>             | Grid                     |
| <b>Reference Well:</b>    | Gutttersen CC32-765        | <b>Survey Calculation Method:</b>   | Minimum Curvature        |
| <b>Well Error:</b>        | 0.00 ft                    | <b>Output errors are at</b>         | 2.00 sigma               |
| <b>Reference Wellbore</b> | Gutttersen CC32-765        | <b>Database:</b>                    | EDMP                     |
| <b>Reference Design:</b>  | Plan #1                    | <b>Offset TVD Reference:</b>        | Offset Datum             |

Reference Depths are relative to Well @ 4792.00ft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.5000000

Coordinates are relative to: Gutttersen CC32-765  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.67°



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