

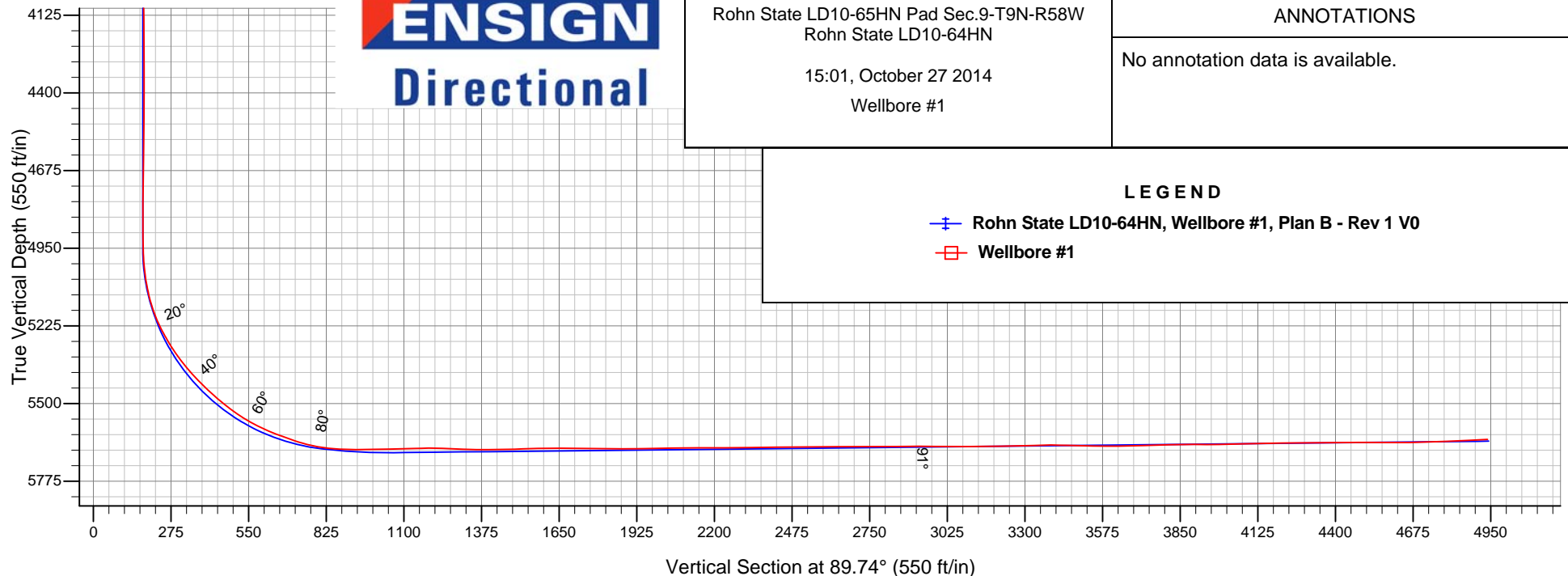
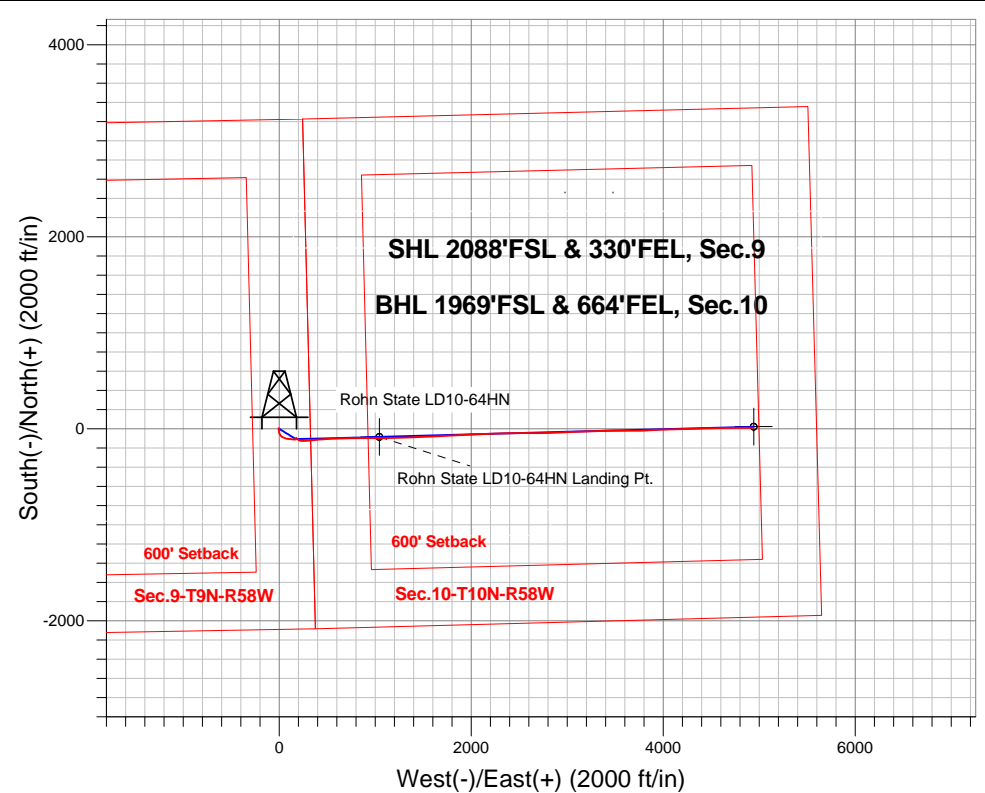
# Noble Energy Inc.- Weld County, CO (Grid North)

Well Name: **Rohn State LD10-64HN**

Surface Location: Rohn State LD10-65HN Pad Sec.9-T9N-R58W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone  
Ground Elevation: 4716.0  
+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1525478.82 3453969.00 40.764310 -103.861110  
PD 829 RKB - 16' WELL @ 4732.0ft (PD 829 RKB - 16')

## FINAL SURVEY

Projected Bottom Hole Location  
10130'MD 5627'TVD 11'N & 4938'E of SHL  
92.8 degree Incl @ 90.4 degree AZM





# **Noble Energy Inc.- Weld County, CO (Grid North)**

**SEC.9-T9N-R58W**

**Rohn State LD10-65HN Pad Sec.9-T9N-R58W**

**Rohn State LD10-64HN**

**Wellbore #1**

**Design: Wellbore #1**

## **Final Survey**

**27 October, 2014**

| Survey                 |                    | Wellbore Data  |                        |               |               |                          |                          |
|------------------------|--------------------|----------------|------------------------|---------------|---------------|--------------------------|--------------------------|
| Measured Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical Section<br>(ft) | Dogleg Rate<br>(°/100ft) |
| 0.0                    | 0.00               | 0.00           | 0.0                    | 0.0           | 0.0           | 0.0                      | 0.00                     |
| 462.0                  | 0.50               | 280.92         | 462.0                  | 0.4           | -2.0          | -2.0                     | 0.11                     |
| 988.0                  | 0.40               | 334.42         | 988.0                  | 2.5           | -5.0          | -5.0                     | 0.08                     |
| 1,228.0                | 0.10               | 39.50          | 1,228.0                | 3.4           | -5.3          | -5.2                     | 0.15                     |
| 1,326.0                | 0.40               | 7.20           | 1,326.0                | 3.8           | -5.2          | -5.1                     | 0.33                     |
| 1,421.0                | 0.50               | 50.10          | 1,421.0                | 4.4           | -4.8          | -4.8                     | 0.36                     |
| 1,514.0                | 0.70               | 321.20         | 1,514.0                | 5.1           | -4.8          | -4.8                     | 0.92                     |
| 1,607.0                | 1.10               | 323.70         | 1,607.0                | 6.3           | -5.7          | -5.7                     | 0.43                     |
| 1,701.0                | 0.80               | 316.30         | 1,700.9                | 7.5           | -6.7          | -6.7                     | 0.34                     |
| 1,794.0                | 1.30               | 194.30         | 1,793.9                | 6.9           | -7.4          | -7.4                     | 1.99                     |

|                  |   |                                     |                                    |
|------------------|---|-------------------------------------|------------------------------------|
| <b>Company:</b>  | Noble Energy Inc.- Weld County, CO (Grid North) | <b>Local Co-ordinate Reference:</b> | Well Rohn State LD10-64HN          |
| <b>Project:</b>  | SEC.9-T9N-R58W                                  | <b>TVD Reference:</b>               | WELL @ 4732.0ft (PD 829 RKB - 16') |
| <b>Site:</b>     | Rohn State LD10-65HN Pad Sec.9-T9N-R58W         | <b>MD Reference:</b>                | WELL @ 4732.0ft (PD 829 RKB - 16') |
| <b>Well:</b>     | Rohn State LD10-64HN                            | <b>North Reference:</b>             | Grid                               |
| <b>Wellbore:</b> | Wellbore #1                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                  |
| <b>Design:</b>   | Wellbore #1                                     | <b>Database:</b>                    | Landmark                           |

| Survey                 |                    |                |                        |               |               |                          |                          |
|------------------------|--------------------|----------------|------------------------|---------------|---------------|--------------------------|--------------------------|
| Measured Depth<br>(ft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical Section<br>(ft) | Dogleg Rate<br>(°/100ft) |
| 1,887.0                | 2.90               | 174.30         | 1,886.9                | 3.5           | -7.5          | -7.4                     | 1.87                     |
| 1,980.0                | 3.60               | 156.40         | 1,979.7                | -1.5          | -6.0          | -6.1                     | 1.32                     |
| 2,073.0                | 4.10               | 174.30         | 2,072.5                | -7.5          | -4.5          | -4.6                     | 1.39                     |
| 2,166.0                | 6.10               | 176.70         | 2,165.1                | -15.7         | -3.9          | -4.0                     | 2.16                     |
| 2,258.0                | 8.10               | 171.30         | 2,256.4                | -27.0         | -2.7          | -2.8                     | 2.29                     |
| 2,351.0                | 8.90               | 164.80         | 2,348.4                | -40.4         | 0.2           | 0.0                      | 1.34                     |
| 2,445.0                | 10.20              | 155.70         | 2,441.1                | -55.0         | 5.5           | 5.3                      | 2.12                     |
| 2,538.0                | 11.10              | 142.40         | 2,532.5                | -69.6         | 14.4          | 14.1                     | 2.81                     |
| 2,627.0                | 10.40              | 126.80         | 2,620.0                | -81.2         | 26.1          | 25.7                     | 3.35                     |
| 2,717.0                | 10.40              | 115.20         | 2,708.5                | -89.5         | 39.9          | 39.5                     | 2.32                     |
| 2,807.0                | 9.50               | 113.10         | 2,797.2                | -95.9         | 54.1          | 53.7                     | 1.08                     |
| 2,896.0                | 9.10               | 107.60         | 2,885.0                | -100.9        | 67.6          | 67.1                     | 1.09                     |
| 2,986.0                | 8.30               | 97.70          | 2,974.0                | -103.9        | 80.8          | 80.3                     | 1.88                     |
| 3,076.0                | 7.90               | 96.20          | 3,063.1                | -105.5        | 93.4          | 92.9                     | 0.50                     |
| 3,165.0                | 7.90               | 95.30          | 3,151.2                | -106.7        | 105.5         | 105.0                    | 0.14                     |
| 3,255.0                | 7.90               | 93.70          | 3,240.4                | -107.7        | 117.9         | 117.4                    | 0.24                     |
| 3,344.0                | 7.70               | 93.60          | 3,328.5                | -108.5        | 129.9         | 129.4                    | 0.23                     |
| 3,434.0                | 7.30               | 96.90          | 3,417.8                | -109.5        | 141.6         | 141.1                    | 0.65                     |
| 3,523.0                | 7.30               | 95.80          | 3,506.1                | -110.8        | 152.9         | 152.3                    | 0.16                     |
| 3,613.0                | 5.80               | 82.80          | 3,595.5                | -110.8        | 163.1         | 162.5                    | 2.33                     |
| 3,702.0                | 4.00               | 79.40          | 3,684.1                | -109.6        | 170.6         | 170.1                    | 2.05                     |
| 3,792.0                | 1.60               | 79.00          | 3,774.0                | -108.8        | 174.9         | 174.4                    | 2.67                     |
| 3,882.0                | 0.70               | 49.70          | 3,864.0                | -108.2        | 176.5         | 176.0                    | 1.16                     |
| 3,971.0                | 0.60               | 46.70          | 3,953.0                | -107.6        | 177.3         | 176.8                    | 0.12                     |
| 4,061.0                | 1.00               | 49.70          | 4,043.0                | -106.7        | 178.2         | 177.7                    | 0.45                     |
| 4,151.0                | 1.00               | 32.30          | 4,133.0                | -105.6        | 179.3         | 178.8                    | 0.34                     |
| 4,240.0                | 1.60               | 6.50           | 4,222.0                | -103.7        | 179.8         | 179.3                    | 0.93                     |
| 4,330.0                | 1.50               | 9.40           | 4,311.9                | -101.3        | 180.1         | 179.7                    | 0.14                     |
| 4,419.0                | 0.90               | 342.60         | 4,400.9                | -99.4         | 180.1         | 179.7                    | 0.91                     |
| 4,509.0                | 1.10               | 335.60         | 4,490.9                | -98.0         | 179.6         | 179.1                    | 0.26                     |
| 4,598.0                | 1.40               | 307.40         | 4,579.9                | -96.5         | 178.3         | 177.9                    | 0.76                     |
| 4,688.0                | 0.60               | 236.60         | 4,669.9                | -96.1         | 177.1         | 176.6                    | 1.48                     |
| 4,778.0                | 0.60               | 240.20         | 4,759.9                | -96.6         | 176.3         | 175.8                    | 0.04                     |
| 4,867.0                | 0.40               | 244.80         | 4,848.8                | -97.0         | 175.6         | 175.1                    | 0.23                     |
| 4,957.0                | 1.80               | 138.60         | 4,938.8                | -98.2         | 176.2         | 175.8                    | 2.17                     |
| 5,002.0                | 4.70               | 138.40         | 4,983.8                | -100.1        | 177.9         | 177.5                    | 6.44                     |
| 5,047.0                | 7.70               | 126.90         | 5,028.5                | -103.3        | 181.6         | 181.1                    | 7.18                     |
| 5,091.0                | 11.70              | 120.90         | 5,071.9                | -107.3        | 187.8         | 187.3                    | 9.36                     |
| 5,136.0                | 15.20              | 123.00         | 5,115.6                | -112.9        | 196.6         | 196.1                    | 7.85                     |
| 5,181.0                | 19.80              | 113.20         | 5,158.5                | -119.1        | 208.6         | 208.0                    | 12.11                    |
| 5,226.0                | 23.50              | 103.90         | 5,200.4                | -124.3        | 224.3         | 223.7                    | 11.19                    |
| 5,271.0                | 27.30              | 92.90          | 5,241.0                | -127.0        | 243.3         | 242.8                    | 13.43                    |
| 5,316.0                | 31.00              | 85.40          | 5,280.3                | -126.6        | 265.2         | 264.6                    | 11.54                    |
| 5,360.0                | 34.30              | 83.30          | 5,317.4                | -124.2        | 288.8         | 288.3                    | 7.93                     |
| 5,405.0                | 38.20              | 83.40          | 5,353.7                | -121.1        | 315.2         | 314.7                    | 8.67                     |

|                  |   |                                     |                                    |
|------------------|---|-------------------------------------|------------------------------------|
| <b>Company:</b>  | Noble Energy Inc.- Weld County, CO (Grid North) | <b>Local Co-ordinate Reference:</b> | Well Rohn State LD10-64HN          |
| <b>Project:</b>  | SEC.9-T9N-R58W                                  | <b>TVD Reference:</b>               | WELL @ 4732.0ft (PD 829 RKB - 16') |
| <b>Site:</b>     | Rohn State LD10-65HN Pad Sec.9-T9N-R58W         | <b>MD Reference:</b>                | WELL @ 4732.0ft (PD 829 RKB - 16') |
| <b>Well:</b>     | Rohn State LD10-64HN                            | <b>North Reference:</b>             | Grid                               |
| <b>Wellbore:</b> | Wellbore #1                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                  |
| <b>Design:</b>   | Wellbore #1                                     | <b>Database:</b>                    | Landmark                           |

| Survey                                  |                    |                |                        |               |               |                          |                          |
|---|--------------------|----------------|------------------------|---------------|---------------|--------------------------|--------------------------|
| Measured Depth<br>(ft)                  | Inclination<br>(°) | Azimuth<br>(°) | Vertical Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical Section<br>(ft) | Dogleg Rate<br>(°/100ft) |
| 5,450.0                                 | 41.70              | 85.70          | 5,388.1                | -118.4        | 344.0         | 343.5                    | 8.44                     |
| 5,495.0                                 | 44.00              | 85.10          | 5,421.1                | -115.9        | 374.5         | 374.0                    | 5.19                     |
| 5,540.0                                 | 47.10              | 84.40          | 5,452.6                | -113.0        | 406.5         | 406.0                    | 6.98                     |
| 5,585.0                                 | 49.80              | 84.20          | 5,482.5                | -109.6        | 440.0         | 439.5                    | 6.01                     |
| 5,629.0                                 | 51.90              | 86.70          | 5,510.3                | -107.0        | 474.0         | 473.5                    | 6.50                     |
| 5,674.0                                 | 55.20              | 88.00          | 5,537.0                | -105.3        | 510.2         | 509.7                    | 7.69                     |
| 5,719.0                                 | 59.80              | 87.80          | 5,561.2                | -103.9        | 548.1         | 547.6                    | 10.23                    |
| 5,764.0                                 | 64.60              | 87.90          | 5,582.2                | -102.4        | 587.8         | 587.4                    | 10.67                    |
| 5,809.0                                 | 67.30              | 87.30          | 5,600.5                | -100.7        | 628.9         | 628.4                    | 6.12                     |
| 5,854.0                                 | 70.40              | 87.90          | 5,616.7                | -98.9         | 670.8         | 670.4                    | 7.00                     |
| 5,898.0                                 | 71.10              | 89.70          | 5,631.2                | -98.1         | 712.4         | 711.9                    | 4.18                     |
| 5,943.0                                 | 75.30              | 89.20          | 5,644.2                | -97.6         | 755.4         | 755.0                    | 9.39                     |
| 5,988.0                                 | 80.50              | 89.50          | 5,653.7                | -97.1         | 799.4         | 799.0                    | 11.57                    |
| 6,004.0                                 | 82.40              | 89.20          | 5,656.0                | -97.0         | 815.2         | 814.8                    | 12.02                    |
| 6,102.0                                 | 89.50              | 90.50          | 5,663.0                | -96.7         | 912.9         | 912.5                    | 7.36                     |
| 6,147.0                                 | 90.90              | 90.40          | 5,662.8                | -97.1         | 957.9         | 957.5                    | 3.12                     |
| 6,231.9                                 | 91.28              | 88.89          | 5,661.2                | -96.5         | 1,042.8       | 1,042.4                  | 1.83                     |
| <b>Rohn State LD10-64HN Landing Pt.</b> |                    |                |                        |               |               |                          |                          |
| 6,237.0                                 | 91.30              | 88.80          | 5,661.1                | -96.4         | 1,047.9       | 1,047.4                  | 1.83                     |
| 6,326.0                                 | 91.60              | 88.00          | 5,658.8                | -94.0         | 1,136.8       | 1,136.4                  | 0.96                     |
| 6,402.0                                 | 89.20              | 88.20          | 5,658.3                | -91.4         | 1,212.8       | 1,212.3                  | 3.17                     |
| 6,497.0                                 | 86.80              | 88.90          | 5,661.6                | -89.0         | 1,307.7       | 1,307.3                  | 2.63                     |
| 6,590.0                                 | 90.90              | 89.10          | 5,663.5                | -87.4         | 1,400.6       | 1,400.2                  | 4.41                     |
| 6,682.0                                 | 91.50              | 88.60          | 5,661.6                | -85.6         | 1,492.6       | 1,492.2                  | 0.85                     |
| 6,777.0                                 | 91.40              | 87.20          | 5,659.2                | -82.1         | 1,587.5       | 1,587.1                  | 1.48                     |
| 6,870.0                                 | 89.90              | 87.10          | 5,658.1                | -77.5         | 1,680.4       | 1,680.0                  | 1.62                     |
| 6,963.0                                 | 88.60              | 86.10          | 5,659.3                | -71.9         | 1,773.2       | 1,772.8                  | 1.76                     |
| 7,056.0                                 | 89.90              | 86.40          | 5,660.5                | -65.9         | 1,866.0       | 1,865.7                  | 1.43                     |
| 7,149.0                                 | 91.40              | 88.00          | 5,659.5                | -61.3         | 1,958.9       | 1,958.6                  | 2.36                     |
| 7,242.0                                 | 90.80              | 87.80          | 5,657.7                | -57.9         | 2,051.8       | 2,051.5                  | 0.68                     |
| 7,335.0                                 | 90.00              | 87.30          | 5,657.0                | -53.9         | 2,144.7       | 2,144.4                  | 1.01                     |
| 7,428.0                                 | 90.40              | 88.00          | 5,656.7                | -50.1         | 2,237.6       | 2,237.4                  | 0.87                     |
| 7,521.0                                 | 90.60              | 88.20          | 5,655.9                | -47.0         | 2,330.6       | 2,330.3                  | 0.30                     |
| 7,614.0                                 | 91.30              | 89.30          | 5,654.4                | -45.0         | 2,423.5       | 2,423.3                  | 1.40                     |
| 7,709.0                                 | 90.00              | 90.70          | 5,653.3                | -45.0         | 2,518.5       | 2,518.3                  | 2.01                     |
| 7,801.0                                 | 89.90              | 90.10          | 5,653.4                | -45.7         | 2,610.5       | 2,610.3                  | 0.66                     |
| 7,895.0                                 | 91.00              | 88.80          | 5,652.6                | -44.8         | 2,704.5       | 2,704.3                  | 1.81                     |
| 7,989.0                                 | 89.60              | 88.30          | 5,652.1                | -42.4         | 2,798.5       | 2,798.2                  | 1.58                     |
| 8,083.0                                 | 90.80              | 88.40          | 5,651.8                | -39.7         | 2,892.4       | 2,892.2                  | 1.28                     |
| 8,177.0                                 | 89.00              | 87.20          | 5,652.0                | -36.1         | 2,986.3       | 2,986.2                  | 2.30                     |
| 8,284.0                                 | 90.60              | 87.10          | 5,652.3                | -30.7         | 3,093.2       | 3,093.0                  | 1.50                     |
| 8,374.0                                 | 90.30              | 87.80          | 5,651.6                | -26.7         | 3,183.1       | 3,183.0                  | 0.85                     |
| 8,463.0                                 | 92.00              | 88.10          | 5,649.9                | -23.6         | 3,272.0       | 3,271.9                  | 1.94                     |
| 8,553.0                                 | 91.10              | 89.00          | 5,647.4                | -21.3         | 3,362.0       | 3,361.8                  | 1.41                     |

|                  |   |                                     |                                    |
|------------------|---|-------------------------------------|------------------------------------|
| <b>Company:</b>  | Noble Energy Inc.- Weld County, CO (Grid North) | <b>Local Co-ordinate Reference:</b> | Well Rohn State LD10-64HN          |
| <b>Project:</b>  | SEC.9-T9N-R58W                                  | <b>TVD Reference:</b>               | WELL @ 4732.0ft (PD 829 RKB - 16') |
| <b>Site:</b>     | Rohn State LD10-65HN Pad Sec.9-T9N-R58W         | <b>MD Reference:</b>                | WELL @ 4732.0ft (PD 829 RKB - 16') |
| <b>Well:</b>     | Rohn State LD10-64HN                            | <b>North Reference:</b>             | Grid                               |
| <b>Wellbore:</b> | Wellbore #1                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                  |
| <b>Design:</b>   | Wellbore #1                                     | <b>Database:</b>                    | Landmark                           |

| Survey                                      |                    |                |                        |               |               |                          |                          |
|---|--------------------|----------------|------------------------|---------------|---------------|--------------------------|--------------------------|
| Measured Depth<br>(ft)                      | Inclination<br>(°) | Azimuth<br>(°) | Vertical Depth<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Vertical Section<br>(ft) | Dogleg Rate<br>(°/100ft) |
| 8,642.0                                     | 88.40              | 89.70          | 5,647.8                | -20.3         | 3,451.0       | 3,450.8                  | 3.13                     |
| 8,732.0                                     | 88.80              | 89.80          | 5,650.0                | -19.9         | 3,540.9       | 3,540.8                  | 0.46                     |
| 8,822.0                                     | 90.40              | 90.00          | 5,650.6                | -19.7         | 3,630.9       | 3,630.8                  | 1.79                     |
| 8,912.0                                     | 92.20              | 89.20          | 5,648.6                | -19.1         | 3,720.9       | 3,720.8                  | 2.19                     |
| 9,001.0                                     | 91.20              | 87.70          | 5,645.9                | -16.7         | 3,809.8       | 3,809.7                  | 2.02                     |
| 9,091.0                                     | 89.70              | 87.00          | 5,645.2                | -12.5         | 3,899.7       | 3,899.6                  | 1.84                     |
| 9,180.0                                     | 91.20              | 87.40          | 5,644.5                | -8.2          | 3,988.6       | 3,988.5                  | 1.74                     |
| 9,270.0                                     | 91.50              | 88.60          | 5,642.4                | -5.0          | 4,078.5       | 4,078.5                  | 1.37                     |
| 9,360.0                                     | 90.30              | 88.60          | 5,641.0                | -2.8          | 4,168.5       | 4,168.4                  | 1.33                     |
| 9,449.0                                     | 91.20              | 88.80          | 5,639.8                | -0.8          | 4,257.5       | 4,257.4                  | 1.04                     |
| 9,539.0                                     | 90.70              | 88.00          | 5,638.4                | 1.7           | 4,347.4       | 4,347.4                  | 1.05                     |
| 9,629.0                                     | 90.30              | 88.00          | 5,637.6                | 4.8           | 4,437.3       | 4,437.3                  | 0.44                     |
| 9,718.0                                     | 89.20              | 88.60          | 5,638.0                | 7.5           | 4,526.3       | 4,526.3                  | 1.41                     |
| 9,808.0                                     | 90.30              | 89.10          | 5,638.3                | 9.3           | 4,616.3       | 4,616.3                  | 1.34                     |
| 9,898.0                                     | 91.80              | 89.00          | 5,636.7                | 10.8          | 4,706.3       | 4,706.3                  | 1.67                     |
| 9,987.0                                     | 92.10              | 89.80          | 5,633.7                | 11.7          | 4,795.2       | 4,795.2                  | 0.96                     |
| 10,068.0                                    | 92.80              | 90.40          | 5,630.2                | 11.6          | 4,876.1       | 4,876.1                  | 1.14                     |
| 10,130.0                                    | 92.80              | 90.40          | 5,627.2                | 11.1          | 4,938.0       | 4,938.0                  | 0.00                     |
| Rohn State LD10-64HN BHL 1980°FSL & 660°FEL |                    |                |                        |               |               |                          |                          |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_