

+N/-S
0.0

+E/-W
0.0

Northing
1361204.59

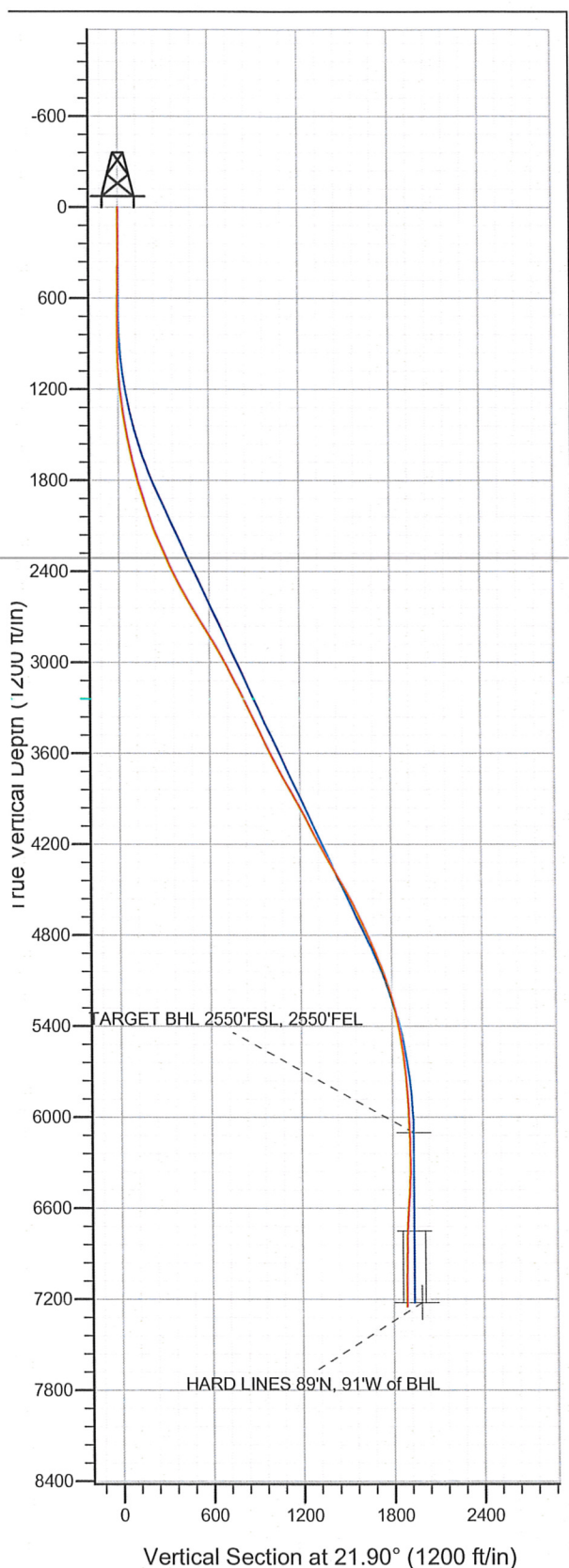
Easting
3236593.38

Latitude
40.321800

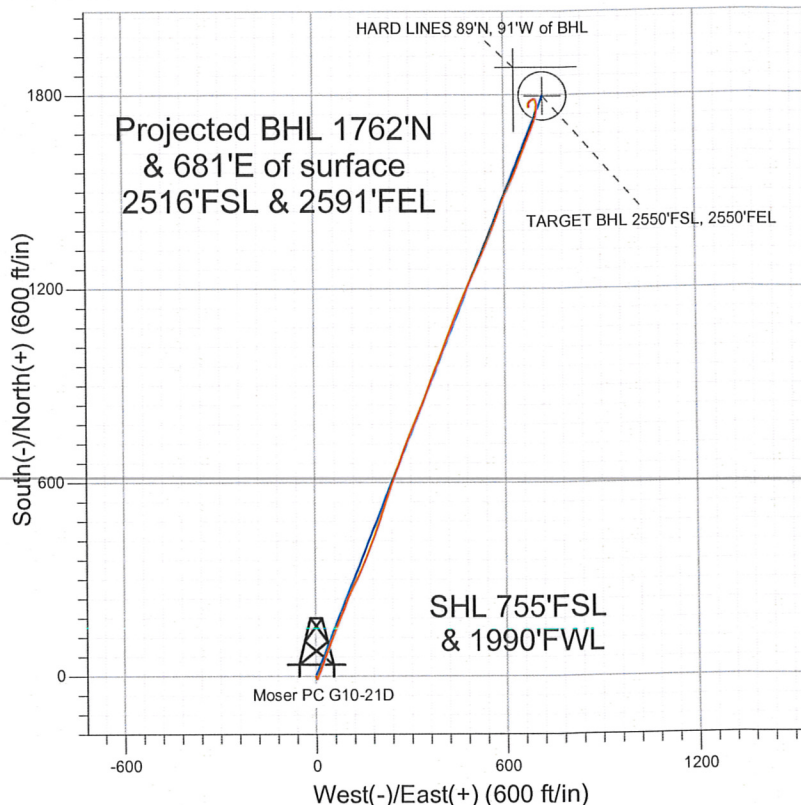
Longitude
-104.651470

Slot

Well Name: Moser PC G10-21D
Surface Location: Moser PC G10-24D Pad Sec.10-T4N- R65W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4697.0
Original Well Elev WELL @ 4710.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



LEGEND

- Survey #1
- + Moser PC G10-21D, Wellbore #1, Noble Moser PC G10-21D Plan #1 (1-9-12) R V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
7665'MD & 7245'TVD @ 1889'VS
0.50 deg Inc 158.30 deg AZ

Project: SEC.10-T4N-R65W
Site: Moser PC G10-24D Pad Sec.10-T4N- R65W
Well: Moser PC G10-21D
Plan: Wellbore #1



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.10-T4N-R65W

Moser PC G10-24D Pad Sec.10-T4N- R65W

Moser PC G10-21D

Wellbore #1

Survey: Survey #1

Standard Survey Report

13 January, 2012



Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.10-T4N-R65W
Site: Moser PC G10-24D Pad Sec.10-T4N- R65W
Well: Moser PC G10-21D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Moser PC G10-21D
TVD Reference: WELL @ 4710.0ft (Original Well Elev)
MD Reference: WELL @ 4710.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Project SEC.10-T4N-R65W, Weld County, Colorado

| | |
|---|-------------------------------------|
| Map System: US State Plane 1983 | System Datum: Mean Sea Level |
| Geo Datum: North American Datum 1983 | Using Well Reference Point |
| Map Zone: Colorado Northern Zone | Using geodetic scale factor |

Site Moser PC G10-24D Pad Sec.10-T4N- R65W

| | | |
|-------------------------------------|----------------------------------|---------------------------------|
| Site Position: | Northing: 1,361,186.55 ft | Latitude: 40.321750 |
| From: Lat/Long | Easting: 3,236,610.29 ft | Longitude: -104.651410 |
| Position Uncertainty: 0.0 ft | Slot Radius: " | Grid Convergence: 0.55 ° |

Well Moser PC G10-21D

| | | | |
|------------------------------------|-------------------------------|----------------------------------|-------------------------------|
| Well Position | +N/-S 0.0 ft | Northing: 1,361,204.59 ft | Latitude: 40.321800 |
| | +E/-W 0.0 ft | Easting: 3,236,593.38 ft | Longitude: -104.651470 |
| Position Uncertainty 0.0 ft | Wellhead Elevation: ft | Ground Level: 4,697.0 ft | |

Wellbore Wellbore #1

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| | IGRF2010 | 1/9/2012 | 8.72 | 66.99 | 53,044 |

Design Wellbore #1

Audit Notes:

Version: 1.0 **Phase:** ACTUAL **Tie On Depth:** 0.0

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|-------------------|--------------------------|---------------|---------------|------------------|
| | 0.0 | 0.0 | 0.0 | 21.90 |

Survey Program **Date** 1/12/2012

| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
|-----------|---------|-------------------------|-----------|----------------|
| 770.0 | 7,665.0 | Survey #1 (Wellbore #1) | MWD | MWD - Standard |

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) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 770.0 | 1.10 | 156.40 | 770.0 | -6.8 | 3.0 | -5.2 | 0.14 | 0.14 | 0.00 |
| 898.0 | 0.90 | 65.70 | 897.9 | -7.5 | 4.4 | -5.3 | 1.12 | -0.16 | -70.86 |
| 1,027.0 | 2.80 | 29.00 | 1,026.9 | -4.3 | 6.8 | -1.5 | 1.66 | 1.47 | -28.45 |
| 1,155.0 | 4.90 | 17.50 | 1,154.6 | 3.6 | 10.0 | 7.1 | 1.74 | 1.64 | -8.98 |
| 1,283.0 | 7.30 | 20.00 | 1,281.8 | 16.5 | 14.4 | 20.7 | 1.89 | 1.88 | 1.95 |
| 1,412.0 | 10.10 | 22.30 | 1,409.3 | 34.7 | 21.5 | 40.2 | 2.19 | 2.17 | 1.78 |
| 1,540.0 | 11.30 | 19.60 | 1,535.1 | 56.9 | 30.0 | 63.9 | 1.02 | 0.94 | -2.11 |
| 1,669.0 | 13.60 | 23.00 | 1,661.1 | 82.7 | 40.1 | 91.7 | 1.87 | 1.78 | 2.64 |
| 1,797.0 | 15.50 | 19.80 | 1,785.0 | 112.7 | 51.8 | 123.9 | 1.61 | 1.48 | -2.50 |
| 1,925.0 | 17.50 | 20.70 | 1,907.7 | 146.8 | 64.4 | 160.2 | 1.58 | 1.56 | 0.70 |
| 2,054.0 | 19.90 | 23.00 | 2,029.9 | 185.1 | 79.8 | 201.6 | 1.95 | 1.86 | 1.78 |
| 2,182.0 | 22.10 | 20.50 | 2,149.4 | 227.8 | 96.8 | 247.4 | 1.86 | 1.72 | -1.95 |

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.10-T4N-R65W
Site: Moser PC G10-24D Pad Sec.10-T4N- R65W
Well: Moser PC G10-21D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Well Moser PC G10-21D
TVD Reference: WELL @ 4710.0ft (Original Well Elev)
MD Reference: WELL @ 4710.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

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) |
|----------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 2,311.0 | 23.20 | 26.30 | 2,268.4 | 273.3 | 116.5 | 297.0 | 1.93 | 0.85 | 4.50 |
| 2,439.0 | 25.40 | 25.60 | 2,385.1 | 320.6 | 139.6 | 349.6 | 1.73 | 1.72 | -0.55 |
| 2,567.0 | 28.20 | 21.80 | 2,499.3 | 373.5 | 162.7 | 407.2 | 2.56 | 2.19 | -2.97 |
| 2,696.0 | 30.70 | 20.90 | 2,611.7 | 432.6 | 185.8 | 470.6 | 1.97 | 1.94 | -0.70 |
| 2,824.0 | 31.40 | 18.20 | 2,721.3 | 494.8 | 207.8 | 536.6 | 1.22 | 0.55 | -2.11 |
| 2,953.0 | 32.10 | 18.60 | 2,831.0 | 559.2 | 229.3 | 604.3 | 0.57 | 0.54 | 0.31 |
| 3,081.0 | 29.50 | 19.10 | 2,941.0 | 621.2 | 250.4 | 669.8 | 2.04 | -2.03 | 0.39 |
| 3,209.0 | 28.40 | 20.90 | 3,053.0 | 679.4 | 271.6 | 731.7 | 1.10 | -0.86 | 1.41 |
| 3,338.0 | 26.10 | 21.90 | 3,167.6 | 734.4 | 293.1 | 790.7 | 1.82 | -1.78 | 0.78 |
| 3,466.0 | 25.60 | 22.80 | 3,282.8 | 786.0 | 314.3 | 846.6 | 0.50 | -0.39 | 0.70 |
| 3,595.0 | 27.30 | 23.30 | 3,398.3 | 838.9 | 336.8 | 904.0 | 1.33 | 1.32 | 0.39 |
| 3,723.0 | 25.40 | 19.80 | 3,513.0 | 891.7 | 357.8 | 960.8 | 1.92 | -1.48 | -2.73 |
| 3,851.0 | 26.60 | 22.10 | 3,628.1 | 944.1 | 377.8 | 1,016.9 | 1.22 | 0.94 | 1.80 |
| 3,980.0 | 29.40 | 21.90 | 3,742.0 | 1,000.2 | 400.5 | 1,077.4 | 2.17 | 2.17 | -0.16 |
| 4,108.0 | 29.80 | 21.60 | 3,853.3 | 1,058.9 | 423.9 | 1,140.7 | 0.33 | 0.31 | -0.23 |
| 4,237.0 | 28.90 | 21.80 | 3,965.7 | 1,117.7 | 447.3 | 1,203.9 | 0.70 | -0.70 | 0.16 |
| 4,365.0 | 27.00 | 22.50 | 4,078.8 | 1,173.3 | 469.9 | 1,263.9 | 1.51 | -1.48 | 0.55 |
| 4,493.0 | 28.80 | 24.70 | 4,191.9 | 1,228.1 | 493.9 | 1,323.7 | 1.62 | 1.41 | 1.72 |
| 4,622.0 | 29.00 | 24.40 | 4,304.8 | 1,284.8 | 519.8 | 1,386.0 | 0.19 | 0.16 | -0.23 |
| 4,750.0 | 29.60 | 23.00 | 4,416.4 | 1,342.2 | 545.0 | 1,448.6 | 0.71 | 0.47 | -1.09 |
| 4,879.0 | 29.70 | 21.20 | 4,528.6 | 1,401.3 | 569.0 | 1,512.4 | 0.69 | 0.08 | -1.40 |
| 5,007.0 | 25.00 | 19.80 | 4,642.2 | 1,456.4 | 589.7 | 1,571.2 | 3.71 | -3.67 | -1.09 |
| 5,135.0 | 24.70 | 26.20 | 4,758.4 | 1,505.8 | 610.6 | 1,624.9 | 2.11 | -0.23 | 5.00 |
| 5,264.0 | 23.00 | 21.60 | 4,876.4 | 1,553.4 | 631.8 | 1,677.0 | 1.95 | -1.32 | -3.57 |
| 5,392.0 | 22.50 | 21.20 | 4,994.4 | 1,599.5 | 649.9 | 1,726.5 | 0.41 | -0.39 | -0.31 |
| 5,521.0 | 17.90 | 21.80 | 5,115.4 | 1,641.0 | 666.2 | 1,771.0 | 3.57 | -3.57 | 0.47 |
| 5,649.0 | 14.90 | 22.80 | 5,238.2 | 1,674.4 | 679.9 | 1,807.1 | 2.35 | -2.34 | 0.78 |
| 5,777.0 | 11.70 | 21.90 | 5,362.8 | 1,701.6 | 691.1 | 1,836.6 | 2.51 | -2.50 | -0.70 |
| 5,906.0 | 9.50 | 14.00 | 5,489.6 | 1,724.1 | 698.5 | 1,860.2 | 2.04 | -1.71 | -6.12 |
| 6,034.0 | 7.30 | 10.00 | 5,616.2 | 1,742.3 | 702.5 | 1,878.6 | 1.78 | -1.72 | -3.13 |
| 6,163.0 | 5.60 | 6.50 | 5,744.4 | 1,756.7 | 704.6 | 1,892.7 | 1.35 | -1.32 | -2.71 |
| 6,291.0 | 3.90 | 357.50 | 5,871.9 | 1,767.2 | 705.1 | 1,902.7 | 1.45 | -1.33 | -7.03 |
| 6,419.0 | 2.90 | 350.00 | 5,999.7 | 1,774.8 | 704.4 | 1,909.4 | 0.85 | -0.78 | -5.86 |
| 6,520.0 | 2.59 | 347.81 | 6,100.6 | 1,779.5 | 703.5 | 1,913.5 | 0.33 | -0.31 | -2.17 |
| TARGET BHL 2550'FSL, 2550'FEL | | | | | | | | | |
| 6,548.0 | 2.50 | 347.10 | 6,128.6 | 1,780.7 | 703.2 | 1,914.5 | 0.33 | -0.31 | -2.52 |
| 6,676.0 | 1.90 | 298.30 | 6,256.5 | 1,784.5 | 700.7 | 1,917.0 | 1.48 | -0.47 | -38.13 |
| 6,805.0 | 2.60 | 260.50 | 6,385.4 | 1,785.0 | 695.9 | 1,915.7 | 1.24 | 0.54 | -29.30 |
| 6,933.0 | 5.00 | 236.20 | 6,513.1 | 1,781.4 | 688.4 | 1,909.6 | 2.22 | 1.88 | -18.98 |
| 7,061.0 | 3.60 | 212.70 | 6,640.7 | 1,774.9 | 681.6 | 1,901.1 | 1.74 | -1.09 | -18.36 |
| 7,168.8 | 1.54 | 180.25 | 6,748.5 | 1,770.6 | 679.8 | 1,896.4 | 2.27 | -1.91 | -30.09 |
| TARGET CIRCLE 2550'FSL, 2550'FEL | | | | | | | | | |
| 7,190.0 | 1.30 | 163.30 | 6,769.6 | 1,770.1 | 679.9 | 1,895.9 | 2.27 | -1.12 | -80.09 |
| 7,318.0 | 1.40 | 186.30 | 6,897.6 | 1,767.2 | 680.1 | 1,893.3 | 0.43 | 0.08 | 17.97 |
| 7,447.0 | 0.90 | 166.10 | 7,026.6 | 1,764.6 | 680.2 | 1,891.0 | 0.49 | -0.39 | -15.66 |
| 7,575.0 | 0.70 | 161.30 | 7,154.6 | 1,762.9 | 680.7 | 1,889.6 | 0.16 | -0.16 | -3.75 |
| 7,618.0 | 0.50 | 158.30 | 7,197.6 | 1,762.5 | 680.8 | 1,889.2 | 0.47 | -0.47 | -6.98 |
| HARD LINES 89'N, 91'W of BHL | | | | | | | | | |
| 7,665.0 | 0.50 | 158.30 | 7,244.6 | 1,762.1 | 681.0 | 1,888.9 | 0.00 | 0.00 | 0.00 |

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.10-T4N-R65W
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Survey Calculation Method: Minimum Curvature
Database: Landmark

| | | |
|-------------------|--------------------|-------------|
| Checked By: _____ | Approved By: _____ | Date: _____ |
|-------------------|--------------------|-------------|