

End of Well Recap For:



Well Name and Number:

Nakagawa B13-65-1HN

Rig: H & P 330

Weld County, CO

Services Provided By:

Sharewell Energy Services





Noble Energy, Inc.

Weld County, CO

Wattenberg Field

Nakagawa B13-65-1HN

OH

Survey: MWD Surveys

Standard Survey Report

23 July, 2013

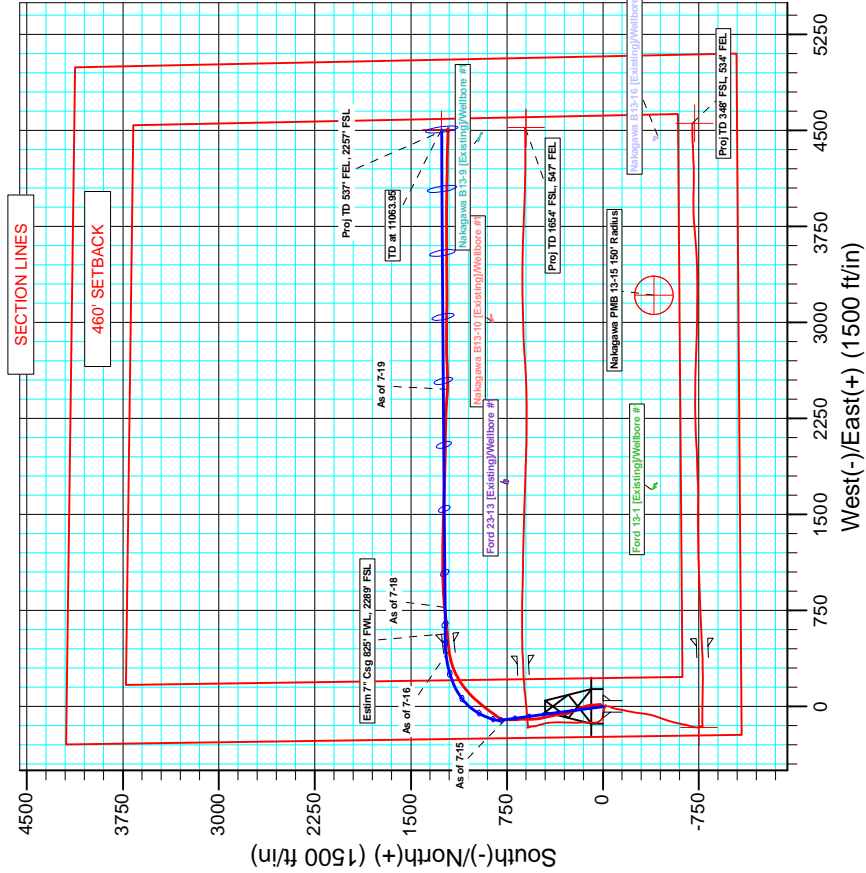
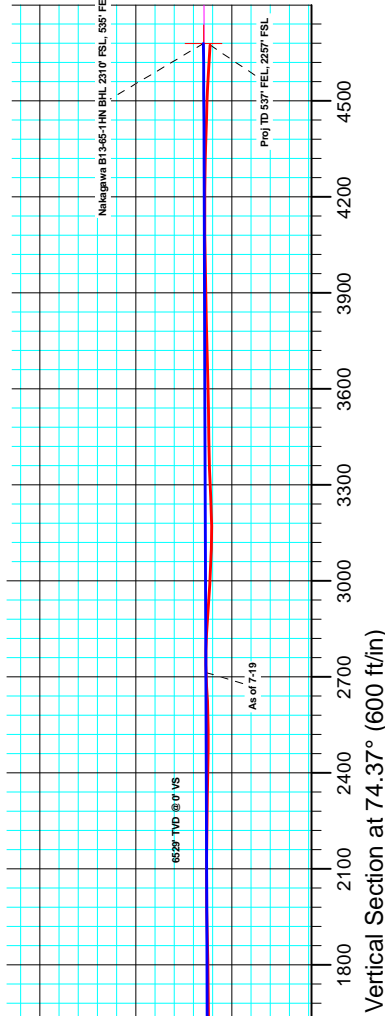
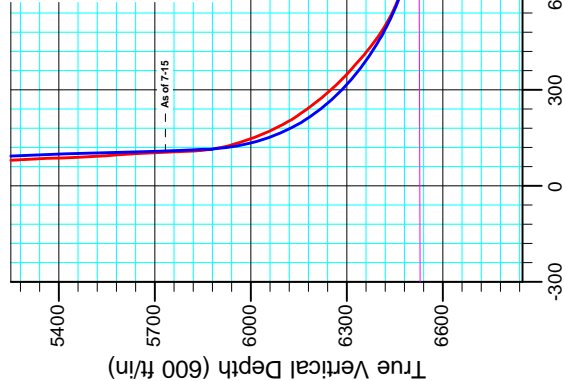
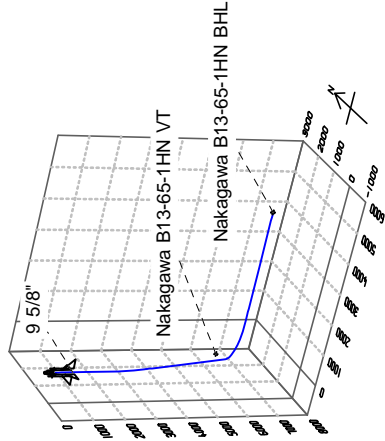


Noble Energy, Inc.
Project: Weld County, CO
Site: Wattenberg Field
Well: Nakagawa B13-65-1HN
Wellbore: OH
Design: plan3.28jun13 rbw
Lat: 40° 23' 41.96 N
Long: 104° 30' 26.03 W
Pad GL: 4570.00
KB @ 4600.00ft



| SECTION DETAILS | | | | | | | | | |
|-----------------|--------|--------|---------|---------|---------|------|--------|---------|----------------------------------|
| MD | Inc | Azi | TVD | +N/-S | +E/-W | Dleg | TFace | VSect | Annotation |
| 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | Start Build 2.00 |
| 2000.00 | 13.000 | 352.39 | 2644.44 | 0.00 | 0.00 | 0.00 | 352.39 | 0.00 | Start 3289.88 hold at 2650.00 MD |
| 5939.88 | 13.000 | 352.39 | 5850.00 | 72.78 | -9.72 | 2.00 | 113.47 | 10.24 | Start DLS 9.09 TFO 44.69 |
| 6310.79 | 43.810 | 26.72 | 6173.94 | 806.32 | -107.73 | 0.00 | 44.69 | 208.54 | Start DLS 9.09 TFO 73.21 |
| 7056.82 | 85.000 | 89.59 | 6516.62 | 967.01 | -53.96 | 9.09 | 73.21 | 813.41 | Start 75.00 hold at 7056.82 MD |
| 7131.82 | 85.000 | 89.59 | 6523.16 | 1232.54 | 500.00 | 0.00 | 0.00 | 885.51 | Start Build 8.00 |
| 7196.82 | 90.200 | 89.59 | 6525.88 | 1233.01 | 639.63 | 8.00 | 0.00 | 948.15 | Start 3867.13 hold at 7196.82 MD |
| 11063.95 | 90.200 | 89.59 | 6512.38 | 1260.68 | 4506.64 | 0.00 | 0.00 | 4679.65 | TD at 11063.95 |

| WELLBORE TARGET DETAILS (LAT/LONG) | | | | | |
|---|---------|---------|---------|-----------------|------------------|
| Name | TVD | +N/-S | +E/-W | Latitude | Longitude |
| Nakagawa B13-65-1HN BHL 2310' FSL, 535' FEL | 6512.34 | 1260.48 | 4506.70 | 40° 23' 53.92 N | 104° 29' 27.60 W |
| Point | | | | | |



T

G

M

True North: -0.64°

Magnetic North: 7.82°

Azimuths to Grid North

Strength: 52948.45nT

Dip Angle: 67.02°

Date: 07/02/2013

Model: IGRF2010

Magnetic Field

Strength: 52948.45nT

Dip Angle: 67.02°

Date: 07/02/2013

Model: IGRF2010

| | | | |
|------------------|---------------------|-------------------------------------|--------------------------|
| Company: | Noble Energy, Inc. | Local Co-ordinate Reference: | Well Nakagawa B13-65-1HN |
| Project: | Weld County, CO | TVD Reference: | KB @ 4600.00ft |
| Site: | Wattenberg Field | MD Reference: | KB @ 4600.00ft |
| Well: | Nakagawa B13-65-1HN | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | CompassVM |

| | | | |
|--------------------|---------------------------|----------------------|-----------------------------|
| Project | Weld County, CO | | |
| Map System: | US State Plane 1983 | System Datum: | Mean Sea Level |
| Geo Datum: | North American Datum 1983 | | |
| Map Zone: | Colorado Northern Zone | | Using geodetic scale factor |

| Site | | Wattenberg Field | | | |
|-----------------------|----------|------------------|-------------------|-------------------|------------------|
| Site Position: | | Northing: | 1,388,239.43 usft | Latitude: | 40° 23' 41.53 N |
| From: | Lat/Long | Easting: | 3,276,511.88 usft | Longitude: | 104° 30' 26.03 W |
| Position Uncertainty: | 0.00 ft | Slot Radius: | 1.10 ft | Grid Convergence: | 0.64 ° |

| Well | Nakagawa B13-65-1HN | | | | | |
|----------------------|---------------------|---------|---------------------|-------------------|---------------|------------------|
| Well Position | +N/-S | 0.00 ft | Northing: | 1,388,283.12 usft | Latitude: | 40° 23' 41.96 N |
| | +E/-W | 0.00 ft | Easting: | 3,276,511.39 usft | Longitude: | 104° 30' 26.03 W |
| Position Uncertainty | | 0.00 ft | Wellhead Elevation: | ft | Ground Level: | 4,570.00 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | OH | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF2010 | 6/10/2013 | 8.46 | 67.02 | 52,948 |

| | | | | | |
|--------------------------|------------------------------|-------------------|-------------------|----------------------|------|
| Design | OH | | | | |
| Audit Notes: | | | | | |
| Version: | 1.0 | Phase: | ACTUAL | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) | |
| | 0.00 | 0.00 | 0.00 | 74.37 | |

| | | | | | |
|-----------------------|----------------|--------------------------|------------------|--------------------|--|
| Survey Program | Date | 7/23/2013 | | | |
| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description | |
| 289.00 | 11,037.00 | MWD Surveys (OH) | 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) | |
| 0.00 | 0.000 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 289.00 | 1.200 | 33.30 | 288.98 | 2.53 | 1.66 | 2.28 | 0.42 | 0.42 | 0.00 | |
| 415.00 | 0.100 | 35.50 | 414.97 | 3.72 | 2.45 | 3.36 | 0.87 | -0.87 | 1.75 | |
| 625.00 | 1.000 | 21.30 | 624.96 | 5.58 | 3.22 | 4.61 | 0.43 | 0.43 | -6.76 | |
| 704.00 | 1.500 | 37.60 | 703.94 | 7.04 | 4.10 | 5.85 | 0.77 | 0.63 | 20.63 | |
| 797.00 | 1.600 | 39.30 | 796.90 | 9.01 | 5.67 | 7.89 | 0.12 | 0.11 | 1.83 | |
| 891.00 | 1.700 | 43.00 | 890.87 | 11.04 | 7.45 | 10.15 | 0.16 | 0.11 | 3.94 | |
| 985.00 | 1.800 | 42.70 | 984.82 | 13.15 | 9.40 | 12.60 | 0.11 | 0.11 | -0.32 | |
| 1,079.00 | 1.800 | 41.00 | 1,078.78 | 15.35 | 11.37 | 15.09 | 0.06 | 0.00 | -1.81 | |
| 1,174.00 | 1.800 | 39.70 | 1,173.73 | 17.62 | 13.30 | 17.56 | 0.04 | 0.00 | -1.37 | |

| | | | |
|------------------|---------------------|-------------------------------------|--------------------------|
| Company: | Noble Energy, Inc. | Local Co-ordinate Reference: | Well Nakagawa B13-65-1HN |
| Project: | Weld County, CO | TVD Reference: | KB @ 4600.00ft |
| Site: | Wattenberg Field | MD Reference: | KB @ 4600.00ft |
| Well: | Nakagawa B13-65-1HN | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | CompassVM |

| Survey | | | | | | | | | | |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) | |
| 1,268.00 | 2.100 | 39.20 | 1,267.67 | 20.09 | 15.34 | 20.18 | 0.32 | 0.32 | -0.53 | |
| 1,361.00 | 0.600 | 28.70 | 1,360.65 | 21.84 | 16.65 | 21.92 | 1.63 | -1.61 | -11.29 | |
| 1,455.00 | 0.700 | 4.80 | 1,454.64 | 22.84 | 16.93 | 22.46 | 0.30 | 0.11 | -25.43 | |
| 1,550.00 | 0.500 | 7.90 | 1,549.63 | 23.83 | 17.04 | 22.83 | 0.21 | -0.21 | 3.26 | |
| 1,645.00 | 0.200 | 346.00 | 1,644.63 | 24.40 | 17.05 | 23.00 | 0.34 | -0.32 | -23.05 | |
| 1,740.00 | 0.200 | 8.80 | 1,739.63 | 24.73 | 17.04 | 23.07 | 0.08 | 0.00 | 24.00 | |
| 1,835.00 | 0.100 | 236.30 | 1,834.63 | 24.85 | 16.99 | 23.06 | 0.29 | -0.11 | -139.47 | |
| 1,929.00 | 0.100 | 199.60 | 1,928.63 | 24.72 | 16.90 | 22.94 | 0.07 | 0.00 | -39.04 | |
| 2,024.00 | 1.200 | 342.40 | 2,023.62 | 25.59 | 16.57 | 22.85 | 1.35 | 1.16 | 150.32 | |
| 2,119.00 | 2.700 | 331.30 | 2,118.57 | 28.51 | 15.20 | 22.31 | 1.62 | 1.58 | -11.68 | |
| 2,214.00 | 3.800 | 348.00 | 2,213.42 | 33.55 | 13.47 | 22.01 | 1.52 | 1.16 | 17.58 | |
| 2,309.00 | 5.500 | 2.10 | 2,308.10 | 41.18 | 12.98 | 23.59 | 2.14 | 1.79 | 14.84 | |
| 2,404.00 | 7.800 | 1.00 | 2,402.46 | 52.17 | 13.26 | 26.82 | 2.42 | 2.42 | -1.16 | |
| 2,499.00 | 9.600 | 353.70 | 2,496.36 | 66.49 | 12.50 | 29.95 | 2.22 | 1.89 | -7.68 | |
| 2,594.00 | 11.100 | 353.10 | 2,589.81 | 83.45 | 10.53 | 32.63 | 1.58 | 1.58 | -0.63 | |
| 2,689.00 | 12.700 | 349.50 | 2,682.77 | 102.80 | 7.53 | 34.95 | 1.86 | 1.68 | -3.79 | |
| 2,783.00 | 11.300 | 351.10 | 2,774.71 | 122.06 | 4.22 | 36.95 | 1.53 | -1.49 | 1.70 | |
| 2,878.00 | 12.000 | 336.90 | 2,867.78 | 140.34 | -1.09 | 36.76 | 3.10 | 0.74 | -14.95 | |
| 2,973.00 | 13.400 | 340.00 | 2,960.45 | 159.77 | -8.73 | 34.64 | 1.64 | 1.47 | 3.26 | |
| 3,068.00 | 13.700 | 336.50 | 3,052.81 | 180.43 | -16.98 | 32.26 | 0.92 | 0.32 | -3.68 | |
| 3,162.00 | 12.700 | 339.00 | 3,144.32 | 200.28 | -25.13 | 29.76 | 1.22 | -1.06 | 2.66 | |
| 3,257.00 | 12.400 | 341.80 | 3,237.06 | 219.72 | -32.05 | 28.33 | 0.71 | -0.32 | 2.95 | |
| 3,352.00 | 11.100 | 334.00 | 3,330.07 | 237.63 | -39.25 | 26.23 | 2.16 | -1.37 | -8.21 | |
| 3,446.00 | 10.600 | 338.20 | 3,422.39 | 253.79 | -46.43 | 23.67 | 0.99 | -0.53 | 4.47 | |
| 3,541.00 | 11.300 | 342.90 | 3,515.66 | 270.80 | -52.41 | 22.49 | 1.19 | 0.74 | 4.95 | |
| 3,636.00 | 13.700 | 354.20 | 3,608.42 | 290.90 | -56.28 | 24.17 | 3.60 | 2.53 | 11.89 | |
| 3,730.00 | 15.700 | 353.70 | 3,699.33 | 314.62 | -58.80 | 28.14 | 2.13 | 2.13 | -0.53 | |
| 3,825.00 | 16.000 | 354.50 | 3,790.72 | 340.42 | -61.47 | 32.52 | 0.39 | 0.32 | 0.84 | |
| 3,920.00 | 14.100 | 352.70 | 3,882.46 | 364.94 | -64.20 | 36.50 | 2.06 | -2.00 | -1.89 | |
| 4,014.00 | 11.900 | 345.50 | 3,974.05 | 385.68 | -68.08 | 38.35 | 2.90 | -2.34 | -7.66 | |
| 4,109.00 | 11.000 | 345.10 | 4,067.16 | 403.92 | -72.86 | 38.66 | 0.95 | -0.95 | -0.42 | |
| 4,204.00 | 9.400 | 342.60 | 4,160.66 | 420.09 | -77.51 | 38.54 | 1.75 | -1.68 | -2.63 | |
| 4,298.00 | 9.800 | 344.70 | 4,253.34 | 435.13 | -81.92 | 38.35 | 0.57 | 0.43 | 2.23 | |
| 4,394.00 | 11.000 | 346.10 | 4,347.76 | 451.90 | -86.27 | 38.67 | 1.28 | 1.25 | 1.46 | |
| 4,488.00 | 11.700 | 348.60 | 4,439.92 | 469.95 | -90.31 | 39.64 | 0.91 | 0.74 | 2.66 | |
| 4,583.00 | 13.600 | 349.50 | 4,532.61 | 490.37 | -94.25 | 41.35 | 2.01 | 2.00 | 0.95 | |
| 4,678.00 | 15.000 | 357.90 | 4,624.68 | 513.65 | -96.74 | 45.23 | 2.63 | 1.47 | 8.84 | |
| 4,773.00 | 13.400 | 354.30 | 4,716.77 | 536.89 | -98.28 | 50.00 | 1.92 | -1.68 | -3.79 | |
| 4,867.00 | 13.900 | 1.40 | 4,808.12 | 559.01 | -99.09 | 55.19 | 1.86 | 0.53 | 7.55 | |
| 4,962.00 | 13.100 | 1.30 | 4,900.50 | 581.19 | -98.57 | 61.67 | 0.84 | -0.84 | -0.11 | |
| 5,057.00 | 11.900 | 1.30 | 4,993.25 | 601.74 | -98.10 | 67.65 | 1.26 | -1.26 | 0.00 | |
| 5,152.00 | 11.900 | 356.90 | 5,086.21 | 621.31 | -98.41 | 72.63 | 0.95 | 0.00 | -4.63 | |
| 5,246.00 | 11.400 | 357.40 | 5,178.27 | 640.27 | -99.35 | 76.83 | 0.54 | -0.53 | 0.53 | |
| 5,341.00 | 11.900 | 358.30 | 5,271.31 | 659.44 | -100.07 | 81.30 | 0.56 | 0.53 | 0.95 | |

| | | | |
|------------------|---------------------|-------------------------------------|--------------------------|
| Company: | Noble Energy, Inc. | Local Co-ordinate Reference: | Well Nakagawa B13-65-1HN |
| Project: | Weld County, CO | TVD Reference: | KB @ 4600.00ft |
| Site: | Wattenberg Field | MD Reference: | KB @ 4600.00ft |
| Well: | Nakagawa B13-65-1HN | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | CompassVM |

| Survey | | | | | | | | | |
|----------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
| 5,436.00 | 11.600 | 355.70 | 5,364.32 | 678.76 | -101.07 | 85.54 | 0.64 | -0.32 | -2.74 |
| 5,531.00 | 13.100 | 355.80 | 5,457.12 | 699.02 | -102.58 | 89.55 | 1.58 | 1.58 | 0.11 |
| 5,626.00 | 13.900 | 0.30 | 5,549.50 | 721.17 | -103.31 | 94.81 | 1.39 | 0.84 | 4.74 |
| 5,721.00 | 12.500 | 359.40 | 5,641.98 | 742.86 | -103.36 | 100.61 | 1.49 | -1.47 | -0.95 |
| 5,815.00 | 11.400 | 357.20 | 5,733.95 | 762.31 | -103.92 | 105.31 | 1.27 | -1.17 | -2.34 |
| As of 7-15 | | | | | | | | | |
| 5,910.00 | 9.500 | 1.20 | 5,827.37 | 779.53 | -104.21 | 109.67 | 2.14 | -2.00 | 4.21 |
| 5,958.00 | 13.700 | 22.50 | 5,874.40 | 788.75 | -101.95 | 114.33 | 12.36 | 8.75 | 44.38 |
| 6,004.00 | 17.900 | 31.20 | 5,918.66 | 799.84 | -96.20 | 122.85 | 10.46 | 9.13 | 18.91 |
| 6,056.00 | 21.400 | 36.40 | 5,967.62 | 814.31 | -86.43 | 136.16 | 7.52 | 6.73 | 10.00 |
| 6,099.00 | 25.100 | 36.30 | 6,007.13 | 827.98 | -76.37 | 149.53 | 8.61 | 8.60 | -0.23 |
| 6,147.00 | 29.500 | 35.10 | 6,049.77 | 845.86 | -63.54 | 166.71 | 9.24 | 9.17 | -2.50 |
| 6,194.00 | 33.900 | 35.50 | 6,089.75 | 866.01 | -49.27 | 185.88 | 9.37 | 9.36 | 0.85 |
| 6,242.00 | 38.100 | 36.20 | 6,128.57 | 888.87 | -32.74 | 207.95 | 8.79 | 8.75 | 1.46 |
| 6,288.00 | 41.100 | 36.30 | 6,164.01 | 912.51 | -15.40 | 231.02 | 6.52 | 6.52 | 0.22 |
| 6,335.00 | 43.200 | 40.00 | 6,198.86 | 937.29 | 4.09 | 256.46 | 6.92 | 4.47 | 7.87 |
| 6,383.00 | 45.800 | 41.50 | 6,233.09 | 962.77 | 26.05 | 284.48 | 5.84 | 5.42 | 3.13 |
| 6,430.00 | 48.000 | 41.20 | 6,265.21 | 988.53 | 48.72 | 313.25 | 4.70 | 4.68 | -0.64 |
| 6,478.00 | 50.600 | 43.20 | 6,296.51 | 1,015.48 | 73.17 | 344.06 | 6.27 | 5.42 | 4.17 |
| 6,526.00 | 53.100 | 46.80 | 6,326.16 | 1,042.14 | 99.87 | 376.95 | 7.87 | 5.21 | 7.50 |
| 6,572.00 | 52.300 | 49.10 | 6,354.04 | 1,066.65 | 127.03 | 409.72 | 4.34 | -1.74 | 5.00 |
| 6,617.00 | 54.200 | 53.80 | 6,380.97 | 1,089.10 | 155.23 | 442.92 | 9.37 | 4.22 | 10.44 |
| 6,667.00 | 58.100 | 57.70 | 6,408.82 | 1,112.43 | 189.55 | 482.26 | 10.14 | 7.80 | 7.80 |
| 6,715.00 | 62.600 | 60.70 | 6,432.57 | 1,133.76 | 225.38 | 522.51 | 10.83 | 9.38 | 6.25 |
| 6,761.00 | 65.800 | 64.50 | 6,452.59 | 1,152.79 | 262.14 | 563.04 | 10.18 | 6.96 | 8.26 |
| 6,856.00 | 73.900 | 73.70 | 6,485.35 | 1,184.37 | 345.35 | 651.67 | 12.46 | 8.53 | 9.68 |
| 6,904.00 | 76.700 | 78.50 | 6,497.54 | 1,195.50 | 390.40 | 698.06 | 11.29 | 5.83 | 10.00 |
| 6,951.00 | 79.000 | 83.30 | 6,507.43 | 1,202.76 | 435.75 | 743.69 | 11.12 | 4.89 | 10.21 |
| As of 7-16 | | | | | | | | | |
| 7,026.00 | 83.400 | 85.80 | 6,518.91 | 1,209.79 | 509.51 | 816.62 | 6.73 | 5.87 | 3.33 |
| As of 7-17 | | | | | | | | | |
| 7,085.00 | 86.311 | 83.73 | 6,524.20 | 1,215.15 | 568.02 | 874.41 | 6.05 | 4.93 | -3.51 |
| Estim 7" Csg 825' FWL, 2289' FSL | | | | | | | | | |
| 7,103.00 | 87.200 | 83.10 | 6,525.22 | 1,217.21 | 585.87 | 892.15 | 6.05 | 4.94 | -3.49 |
| 7,197.00 | 93.300 | 84.80 | 6,524.81 | 1,227.11 | 679.30 | 984.79 | 6.74 | 6.49 | 1.81 |
| 7,292.00 | 89.600 | 83.80 | 6,522.40 | 1,236.55 | 773.78 | 1,078.32 | 4.03 | -3.89 | -1.05 |
| As of 7-18 | | | | | | | | | |
| 7,387.00 | 88.300 | 86.00 | 6,524.14 | 1,244.99 | 868.38 | 1,171.70 | 2.69 | -1.37 | 2.32 |
| 7,482.00 | 89.500 | 88.90 | 6,525.97 | 1,249.21 | 963.26 | 1,264.21 | 3.30 | 1.26 | 3.05 |
| 7,577.00 | 89.200 | 88.90 | 6,527.05 | 1,251.04 | 1,058.23 | 1,356.16 | 0.32 | -0.32 | 0.00 |
| 7,671.00 | 89.800 | 91.10 | 6,527.87 | 1,251.04 | 1,152.23 | 1,446.68 | 2.43 | 0.64 | 2.34 |
| 7,766.00 | 89.800 | 90.60 | 6,528.20 | 1,249.63 | 1,247.21 | 1,537.77 | 0.53 | 0.00 | -0.53 |
| 7,861.00 | 90.500 | 90.20 | 6,527.95 | 1,248.96 | 1,342.21 | 1,629.08 | 0.85 | 0.74 | -0.42 |
| 7,956.00 | 90.200 | 90.80 | 6,527.37 | 1,248.14 | 1,437.20 | 1,720.34 | 0.71 | -0.32 | 0.63 |

| | | | |
|------------------|---------------------|-------------------------------------|--------------------------|
| Company: | Noble Energy, Inc. | Local Co-ordinate Reference: | Well Nakagawa B13-65-1HN |
| Project: | Weld County, CO | TVD Reference: | KB @ 4600.00ft |
| Site: | Wattenberg Field | MD Reference: | KB @ 4600.00ft |
| Well: | Nakagawa B13-65-1HN | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | CompassVM |

| 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) |
| 8,051.00 | 91.900 | 92.40 | 6,525.63 | 1,245.48 | 1,532.14 | 1,811.05 | 2.46 | 1.79 | 1.68 |
| 8,146.00 | 90.800 | 91.60 | 6,523.39 | 1,242.17 | 1,627.06 | 1,901.56 | 1.43 | -1.16 | -0.84 |
| 8,240.00 | 90.800 | 92.70 | 6,522.08 | 1,238.64 | 1,720.98 | 1,991.06 | 1.17 | 0.00 | 1.17 |
| 8,335.00 | 90.200 | 91.10 | 6,521.25 | 1,235.49 | 1,815.92 | 2,081.64 | 1.80 | -0.63 | -1.68 |
| 8,429.00 | 89.500 | 90.50 | 6,521.49 | 1,234.18 | 1,909.91 | 2,171.80 | 0.98 | -0.74 | -0.64 |
| 8,524.00 | 89.200 | 91.10 | 6,522.57 | 1,232.86 | 2,004.90 | 2,262.92 | 0.71 | -0.32 | 0.63 |
| 8,619.00 | 88.500 | 91.30 | 6,524.48 | 1,230.87 | 2,099.86 | 2,353.83 | 0.77 | -0.74 | 0.21 |
| 8,713.00 | 88.900 | 90.70 | 6,526.61 | 1,229.23 | 2,193.82 | 2,443.88 | 0.77 | 0.43 | -0.64 |
| 8,808.00 | 90.300 | 92.20 | 6,527.27 | 1,226.82 | 2,288.78 | 2,534.68 | 2.16 | 1.47 | 1.58 |
| 8,903.00 | 93.600 | 95.40 | 6,524.04 | 1,220.53 | 2,383.49 | 2,624.19 | 4.84 | 3.47 | 3.37 |
| 8,998.00 | 91.600 | 92.40 | 6,519.73 | 1,214.08 | 2,478.16 | 2,713.62 | 3.79 | -2.11 | -3.16 |
| As of 7-19 | | | | | | | | | |
| 9,093.00 | 87.700 | 87.80 | 6,520.31 | 1,213.92 | 2,573.11 | 2,805.02 | 6.35 | -4.11 | -4.84 |
| 9,188.00 | 85.800 | 86.90 | 6,525.70 | 1,218.30 | 2,667.85 | 2,897.44 | 2.21 | -2.00 | -0.95 |
| 9,282.00 | 87.000 | 89.20 | 6,531.60 | 1,221.49 | 2,761.60 | 2,988.58 | 2.76 | 1.28 | 2.45 |
| 9,377.00 | 87.400 | 90.30 | 6,536.24 | 1,221.90 | 2,856.49 | 3,080.07 | 1.23 | 0.42 | 1.16 |
| 9,472.00 | 91.600 | 90.50 | 6,537.07 | 1,221.24 | 2,951.46 | 3,171.35 | 4.43 | 4.42 | 0.21 |
| 9,567.00 | 92.000 | 90.30 | 6,534.09 | 1,220.58 | 3,046.41 | 3,262.61 | 0.47 | 0.42 | -0.21 |
| 9,661.00 | 92.200 | 91.00 | 6,530.64 | 1,219.51 | 3,140.34 | 3,352.78 | 0.77 | 0.21 | 0.74 |
| 9,756.00 | 89.900 | 89.20 | 6,528.90 | 1,219.35 | 3,235.31 | 3,444.20 | 3.07 | -2.42 | -1.89 |
| 9,851.00 | 91.300 | 89.30 | 6,527.91 | 1,220.59 | 3,330.30 | 3,536.01 | 1.48 | 1.47 | 0.11 |
| 9,946.00 | 91.000 | 89.90 | 6,526.00 | 1,221.25 | 3,425.28 | 3,627.65 | 0.71 | -0.32 | 0.63 |
| 10,041.00 | 91.800 | 90.90 | 6,523.68 | 1,220.59 | 3,520.24 | 3,718.93 | 1.35 | 0.84 | 1.05 |
| 10,135.00 | 91.300 | 89.60 | 6,521.14 | 1,220.18 | 3,614.21 | 3,809.31 | 1.48 | -0.53 | -1.38 |
| 10,230.00 | 91.100 | 89.50 | 6,519.15 | 1,220.93 | 3,709.18 | 3,900.97 | 0.24 | -0.21 | -0.11 |
| 10,325.00 | 91.300 | 89.60 | 6,517.16 | 1,221.67 | 3,804.16 | 3,992.64 | 0.24 | 0.21 | 0.11 |
| 10,420.00 | 90.600 | 90.20 | 6,515.58 | 1,221.84 | 3,899.14 | 4,084.15 | 0.97 | -0.74 | 0.63 |
| 10,514.00 | 89.700 | 90.70 | 6,515.34 | 1,221.10 | 3,993.14 | 4,174.47 | 1.10 | -0.96 | 0.53 |
| 10,609.00 | 89.200 | 90.90 | 6,516.25 | 1,219.77 | 4,088.13 | 4,265.59 | 0.57 | -0.53 | 0.21 |
| 10,704.00 | 88.400 | 91.30 | 6,518.24 | 1,217.95 | 4,183.09 | 4,356.55 | 0.94 | -0.84 | 0.42 |
| 10,798.00 | 88.300 | 91.10 | 6,520.94 | 1,215.98 | 4,277.03 | 4,446.48 | 0.24 | -0.11 | -0.21 |
| 10,893.00 | 87.200 | 91.50 | 6,524.67 | 1,213.83 | 4,371.93 | 4,537.30 | 1.23 | -1.16 | 0.42 |
| 10,968.00 | 86.600 | 91.80 | 6,528.73 | 1,211.67 | 4,446.79 | 4,608.81 | 0.89 | -0.80 | 0.40 |
| 11,025.27 | 86.600 | 91.80 | 6,532.13 | 1,209.88 | 4,503.93 | 4,663.35 | 0.00 | 0.00 | 0.00 |
| Nakagawa B13-65-1HN BHL 2310' FSL, 535' FEL | | | | | | | | | |
| 11,037.00 | 86.600 | 91.80 | 6,532.82 | 1,209.51 | 4,515.63 | 4,674.52 | 0.00 | 0.00 | 0.00 |
| Proj TD 537' FEL, 2257' FSL | | | | | | | | | |

| | | | |
|------------------|---------------------|-------------------------------------|--------------------------|
| Company: | Noble Energy, Inc. | Local Co-ordinate Reference: | Well Nakagawa B13-65-1HN |
| Project: | Weld County, CO | TVD Reference: | KB @ 4600.00ft |
| Site: | Wattenberg Field | MD Reference: | KB @ 4600.00ft |
| Well: | Nakagawa B13-65-1HN | North Reference: | Grid |
| Wellbore: | OH | Survey Calculation Method: | Minimum Curvature |
| Design: | OH | Database: | CompassVM |

| Casing Points | | | | | |
|---------------------|---------------------|----------------------------------|--|----------------------|--------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | | Casing Diameter (ft) | Hole Diameter (ft) |
| 7,085.00 | 6,524.20 | Estim 7" Csg 825' FWL, 2289' FSL | | 0.58 | 0.62 |

| Survey Annotations | | | | | |
|---------------------|---------------------|-------------------|------------|-----------------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Local Coordinates | | Comment | |
| | | +N/-S (ft) | +E/-W (ft) | | |
| 5,815.00 | 5,733.95 | 762.31 | -103.92 | As of 7-15 | |
| 6,951.00 | 6,507.43 | 1,202.76 | 435.75 | As of 7-16 | |
| 7,026.00 | 6,518.91 | 1,209.79 | 509.51 | As of 7-17 | |
| 7,292.00 | 6,522.40 | 1,236.55 | 773.78 | As of 7-18 | |
| 8,998.00 | 6,519.73 | 1,214.08 | 2,478.16 | As of 7-19 | |
| 11,037.00 | 6,532.82 | 1,209.51 | 4,515.63 | Proj TD 537' FEL, 2257' FSL | |

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