

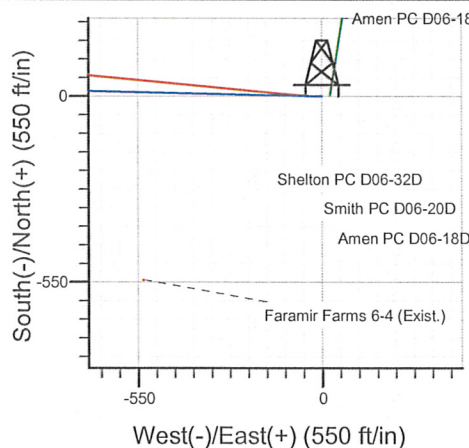
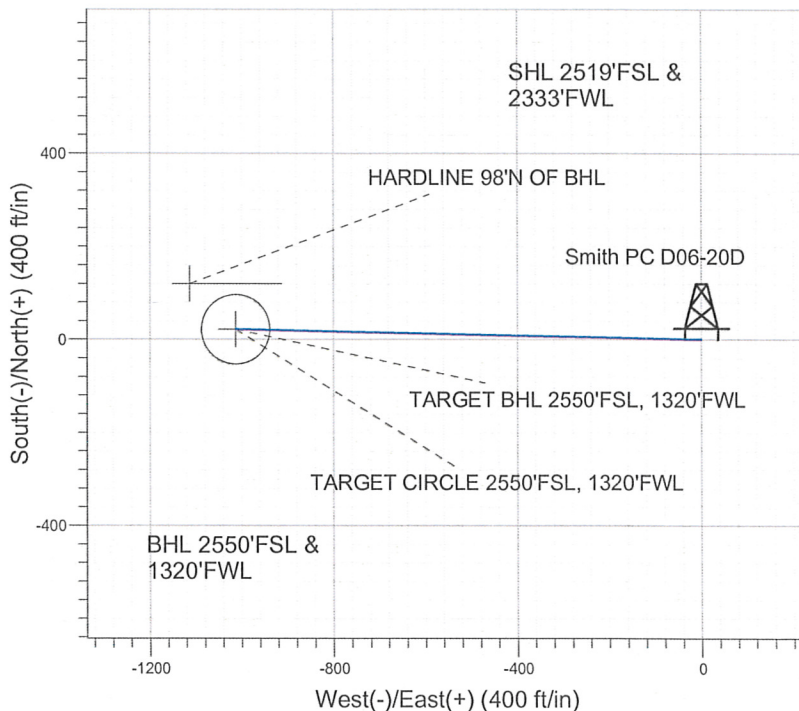
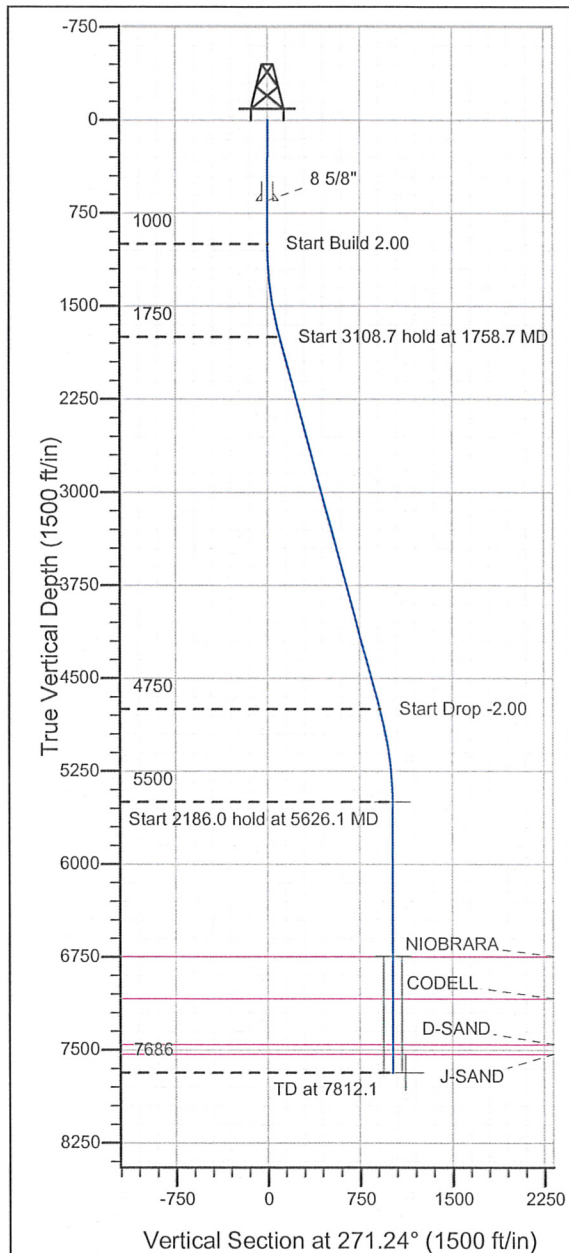
Well Name: **Smith PC D06-20D**

Surface Location: Shelton PC D06-32D Pad Sec.6-T3N-R64W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4823.0

+N/-S +E/-W Northing Easting Latitude Longitude Slot  
0.0 0.0 1336650.72 3252836.05 40° 15' 14.256 N 104° 35' 38.832 W  
Original Well Elev WELL @ 4836.0ft (Original Well Elev)

### NOBLE ENERGY INC WELD COUNTY CO



Smith PC D06-20D  
Noble Smith PC D06-20D Plan #1 (06-15-10)  
10:16, June 18 2010



Azimuths to True North  
Magnetic North: 8.89°  
Magnetic Field  
Strength: 53178.9snT  
Dip Angle: 67.00°  
Date: 6/15/2010  
Model: IGRF2010

#### WELLBORE TARGET DETAILS (LAT/LONG)

| Name                             | TVD    | +N/-S | +E/-W   | Latitude         | Longitude         | Shape                 |
|----------------------------------|--------|-------|---------|------------------|-------------------|-----------------------|
| TARGET BHL 2550'FSL, 1320'FWL    | 5500.0 | 21.9  | -1013.2 | 40° 15' 14.472 N | 104° 35' 51.900 W | Point                 |
| TARGET CIRCLE 2550'FSL, 1320'FWL | 6746.0 | 21.9  | -1013.2 | 40° 15' 14.472 N | 104° 35' 51.900 W | Circle (Radius: 75.0) |
| HARDLINE 98'N OF BHL             | 7686.0 | 119.9 | -1113.2 | 40° 15' 15.440 N | 104° 35' 53.190 W | Polygon               |

#### SECTION DETAILS

| Sec | MD     | Inc   | Azi    | TVD    | +N/-S | +E/-W   | DLeg | TFace  | VSec   | Target                        |
|-----|--------|-------|--------|--------|-------|---------|------|--------|--------|-------------------------------|
| 1   | 0.0    | 0.00  | 0.00   | 0.0    | 0.0   | 0.0     | 0.00 | 0.00   | 0.0    |                               |
| 2   | 1000.0 | 0.00  | 0.00   | 1000.0 | 0.0   | 0.0     | 0.00 | 0.00   | 0.0    |                               |
| 3   | 1758.7 | 15.17 | 271.24 | 1749.9 | 2.2   | -99.9   | 2.00 | 271.24 | 99.9   |                               |
| 4   | 4867.4 | 15.17 | 271.24 | 4750.1 | 19.7  | -913.4  | 0.00 | 0.00   | 913.6  |                               |
| 5   | 5626.1 | 0.00  | 0.00   | 5500.0 | 21.9  | -1013.2 | 2.00 | 180.00 | 1013.5 | TARGET BHL 2550'FSL, 1320'FWL |
| 6   | 7812.1 | 0.00  | 0.00   | 7686.0 | 21.9  | -1013.2 | 0.00 | 0.00   | 1013.5 |                               |



## **Directional**

### **NOBLE ENERGY INC WELD COUNTY CO**

**SEC.6-T3N-R64W**

**Shelton PC D06-32D Pad Sec.6-T3N-R64W**

**Smith PC D06-20D**

**Wellbore #1**

**Plan: Noble Smith PC D06-20D Plan #1 (06-15-10)**

### **Standard Planning Report**

**18 June, 2010**

**Database:** Landmark  
**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.6-T3N-R64W  
**Site:** Shelton PC D06-32D Pad Sec.6-T3N-R64W  
**Well:** Smith PC D06-20D  
**Wellbore:** Wellbore #1  
**Design:** Noble Smith PC D06-20D Plan #1 (06-15-10)

**Local Co-ordinate Reference:** Well Smith PC D06-20D  
**TVD Reference:** WELL @ 4836.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4836.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

|                    |                                       |                      |                             |
|--------------------|---------------------------------------|----------------------|-----------------------------|
| <b>Project</b>     | SEC.6-T3N-R64W, 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             |                      | Using Well Reference Point  |
| <b>Map Zone:</b>   | Colorado Northern Zone                |                      | Using geodetic scale factor |

|                       |          |                                       |                |                   |                   |
|-----------------------|----------|---------------------------------------|----------------|-------------------|-------------------|
| Site                  |          | Shelton PC D06-32D Pad Sec.6-T3N-R64W |                |                   |                   |
| Site Position:        |          | Northing:                             | 1,336,650.48ft | Latitude:         | 40° 15' 14.256 N  |
| From:                 | Lat/Long | Easting:                              | 3,252,810.93ft | Longitude:        | 104° 35' 39.156 W |
| Position Uncertainty: | 0.0 ft   | Slot Radius:                          | "              | Grid Convergence: | 0.59 °            |

|                      |                  |         |                     |                 |               |                   |
|----------------------|------------------|---------|---------------------|-----------------|---------------|-------------------|
| Well                 | Smith PC D06-20D |         |                     |                 |               |                   |
| Well Position        | +N/-S            | 0.0 ft  | Northing:           | 1,336,650.72 ft | Latitude:     | 40° 15' 14.256 N  |
|                      | +E/-W            | 25.1 ft | Easting:            | 3,252,836.05 ft | Longitude:    | 104° 35' 38.832 W |
| Position Uncertainty |                  | 0.0 ft  | Wellhead Elevation: | ft              | Ground Level: | 4,823.0 ft        |

|                  |                   |                    |                        |                      |                            |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| <b>Wellbore</b>  | Wellbore #1       |                    |                        |                      |                            |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination (°)</b> | <b>Dip Angle (°)</b> | <b>Field Strength (nT)</b> |
|                  | IGRF2010          | 6/15/2010          | 8.89                   | 67.00                | 53,179                     |

|                          |   |                   |                      |                      |  |
|--------------------------|---|-------------------|----------------------|----------------------|--|
| <b>Design</b>            | Noble Smith PC D06-20D Plan #1 (06-15-10) |                   |                      |                      |  |
| <b>Audit Notes:</b>      |   |                   |                      |                      |  |
| <b>Version:</b>          | <b>Phase:</b>                             | PROTOTYPE         | <b>Tie On Depth:</b> | 0.0                  |  |
| <b>Vertical Section:</b> | <b>Depth From (TVD) (ft)</b>              | <b>+N/-S (ft)</b> | <b>+E/-W (ft)</b>    | <b>Direction (°)</b> |  |
|                          | 0.0                                       | 0.0               | 0.0                  | 271.24               |  |

| Plan Sections       |                 |             |                     |            |            |                       |                      |                     |         |                 |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|----------------------|---------------------|---------|-----------------|
| 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          |
| 0.0                 | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                 |
| 1,000.0             | 0.00            | 0.00        | 1,000.0             | 0.0        | 0.0        | 0.00                  | 0.00                 | 0.00                | 0.00    |                 |
| 1,758.7             | 15.17           | 271.24      | 1,749.9             | 2.2        | -99.9      | 2.00                  | 2.00                 | 0.00                | 271.24  |                 |
| 4,867.4             | 15.17           | 271.24      | 4,750.1             | 19.7       | -913.4     | 0.00                  | 0.00                 | 0.00                | 0.00    |                 |
| 5,626.1             | 0.00            | 0.00        | 5,500.0             | 21.9       | -1,013.2   | 2.00                  | -2.00                | 0.00                | 180.00  | TARGET BHL 255C |
| 7,812.1             | 0.00            | 0.00        | 7,686.0             | 21.9       | -1,013.2   | 0.00                  | 0.00                 | 0.00                | 0.00    |                 |



Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.6-T3N-R64W  
Site: Shelton PC D06-32D Pad Sec.6-T3N-R64W  
Well: Smith PC D06-20D  
Wellbore: Wellbore #1  
Design: Noble Smith PC D06-20D Plan #1 (06-15-10)

Local Co-ordinate Reference: Well Smith PC D06-20D  
TVD Reference: WELL @ 4836.0ft (Original Well Elev)  
MD Reference: WELL @ 4836.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

## 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) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 0.0                 | 0.00            | 0.00        | 0.0                 | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 40.0                | 0.00            | 0.00        | 40.0                | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 80.0                | 0.00            | 0.00        | 80.0                | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 120.0               | 0.00            | 0.00        | 120.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 160.0               | 0.00            | 0.00        | 160.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 200.0               | 0.00            | 0.00        | 200.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 240.0               | 0.00            | 0.00        | 240.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 280.0               | 0.00            | 0.00        | 280.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 320.0               | 0.00            | 0.00        | 320.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 360.0               | 0.00            | 0.00        | 360.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 400.0               | 0.00            | 0.00        | 400.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 440.0               | 0.00            | 0.00        | 440.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 480.0               | 0.00            | 0.00        | 480.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 520.0               | 0.00            | 0.00        | 520.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 560.0               | 0.00            | 0.00        | 560.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 600.0               | 0.00            | 0.00        | 600.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 640.0               | 0.00            | 0.00        | 640.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 650.0               | 0.00            | 0.00        | 650.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 8 5/8"              |                 |             |                     |            |            |                       |                       |                      |                     |
| 680.0               | 0.00            | 0.00        | 680.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 720.0               | 0.00            | 0.00        | 720.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 760.0               | 0.00            | 0.00        | 760.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 800.0               | 0.00            | 0.00        | 800.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 840.0               | 0.00            | 0.00        | 840.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 880.0               | 0.00            | 0.00        | 880.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 920.0               | 0.00            | 0.00        | 920.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 960.0               | 0.00            | 0.00        | 960.0               | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 1,000.0             | 0.00            | 0.00        | 1,000.0             | 0.0        | 0.0        | 0.0                   | 0.00                  | 0.00                 | 0.00                |
| 1,040.0             | 0.80            | 271.24      | 1,040.0             | 0.0        | -0.3       | 0.3                   | 2.00                  | 2.00                 | 0.00                |
| 1,080.0             | 1.60            | 271.24      | 1,080.0             | 0.0        | -1.1       | 1.1                   | 2.00                  | 2.00                 | 0.00                |
| 1,120.0             | 2.40            | 271.24      | 1,120.0             | 0.1        | -2.5       | 2.5                   | 2.00                  | 2.00                 | 0.00                |
| 1,160.0             | 3.20            | 271.24      | 1,159.9             | 0.1        | -4.5       | 4.5                   | 2.00                  | 2.00                 | 0.00                |
| 1,200.0             | 4.00            | 271.24      | 1,199.8             | 0.2        | -7.0       | 7.0                   | 2.00                  | 2.00                 | 0.00                |
| 1,240.0             | 4.80            | 271.24      | 1,239.7             | 0.2        | -10.0      | 10.0                  | 2.00                  | 2.00                 | 0.00                |
| 1,280.0             | 5.60            | 271.24      | 1,279.6             | 0.3        | -13.7      | 13.7                  | 2.00                  | 2.00                 | 0.00                |
| 1,320.0             | 6.40            | 271.24      | 1,319.3             | 0.4        | -17.8      | 17.9                  | 2.00                  | 2.00                 | 0.00                |
| 1,360.0             | 7.20            | 271.24      | 1,359.1             | 0.5        | -22.6      | 22.6                  | 2.00                  | 2.00                 | 0.00                |
| 1,400.0             | 8.00            | 271.24      | 1,398.7             | 0.6        | -27.9      | 27.9                  | 2.00                  | 2.00                 | 0.00                |
| 1,440.0             | 8.80            | 271.24      | 1,438.3             | 0.7        | -33.7      | 33.7                  | 2.00                  | 2.00                 | 0.00                |
| 1,480.0             | 9.60            | 271.24      | 1,477.8             | 0.9        | -40.1      | 40.1                  | 2.00                  | 2.00                 | 0.00                |
| 1,520.0             | 10.40           | 271.24      | 1,517.1             | 1.0        | -47.1      | 47.1                  | 2.00                  | 2.00                 | 0.00                |
| 1,560.0             | 11.20           | 271.24      | 1,556.4             | 1.2        | -54.5      | 54.6                  | 2.00                  | 2.00                 | 0.00                |
| 1,600.0             | 12.00           | 271.24      | 1,595.6             | 1.4        | -62.6      | 62.6                  | 2.00                  | 2.00                 | 0.00                |
| 1,640.0             | 12.80           | 271.24      | 1,634.7             | 1.5        | -71.2      | 71.2                  | 2.00                  | 2.00                 | 0.00                |
| 1,680.0             | 13.60           | 271.24      | 1,673.6             | 1.7        | -80.3      | 80.3                  | 2.00                  | 2.00                 | 0.00                |
| 1,720.0             | 14.40           | 271.24      | 1,712.4             | 1.9        | -90.0      | 90.0                  | 2.00                  | 2.00                 | 0.00                |
| 1,758.7             | 15.17           | 271.24      | 1,749.9             | 2.2        | -99.9      | 99.9                  | 2.00                  | 2.00                 | 0.00                |
| 1,760.0             | 15.17           | 271.24      | 1,751.1             | 2.2        | -100.2     | 100.2                 | 0.00                  | 0.00                 | 0.00                |
| 1,800.0             | 15.17           | 271.24      | 1,789.7             | 2.4        | -110.7     | 110.7                 | 0.00                  | 0.00                 | 0.00                |
| 1,840.0             | 15.17           | 271.24      | 1,828.3             | 2.6        | -121.1     | 121.2                 | 0.00                  | 0.00                 | 0.00                |
| 1,880.0             | 15.17           | 271.24      | 1,866.9             | 2.8        | -131.6     | 131.6                 | 0.00                  | 0.00                 | 0.00                |
| 1,920.0             | 15.17           | 271.24      | 1,905.5             | 3.1        | -142.1     | 142.1                 | 0.00                  | 0.00                 | 0.00                |
| 1,960.0             | 15.17           | 271.24      | 1,944.1             | 3.3        | -152.5     | 152.6                 | 0.00                  | 0.00                 | 0.00                |
| 2,000.0             | 15.17           | 271.24      | 1,982.7             | 3.5        | -163.0     | 163.0                 | 0.00                  | 0.00                 | 0.00                |



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Design: Noble Smith PC D06-20D Plan #1 (06-15-10)

Local Co-ordinate Reference: Well Smith PC D06-20D  
TVD Reference: WELL @ 4836.0ft (Original Well Elev)  
MD Reference: WELL @ 4836.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

## 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) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 2,040.0             | 15.17           | 271.24      | 2,021.4             | 3.7        | -173.5     | 173.5                 | 0.00                  | 0.00                 | 0.00                |
| 2,080.0             | 15.17           | 271.24      | 2,060.0             | 4.0        | -183.9     | 184.0                 | 0.00                  | 0.00                 | 0.00                |
| 2,120.0             | 15.17           | 271.24      | 2,098.6             | 4.2        | -194.4     | 194.5                 | 0.00                  | 0.00                 | 0.00                |
| 2,160.0             | 15.17           | 271.24      | 2,137.2             | 4.4        | -204.9     | 204.9                 | 0.00                  | 0.00                 | 0.00                |
| 2,200.0             | 15.17           | 271.24      | 2,175.8             | 4.7        | -215.3     | 215.4                 | 0.00                  | 0.00                 | 0.00                |
| 2,240.0             | 15.17           | 271.24      | 2,214.4             | 4.9        | -225.8     | 225.9                 | 0.00                  | 0.00                 | 0.00                |
| 2,280.0             | 15.17           | 271.24      | 2,253.0             | 5.1        | -236.3     | 236.3                 | 0.00                  | 0.00                 | 0.00                |
| 2,320.0             | 15.17           | 271.24      | 2,291.6             | 5.3        | -246.7     | 246.8                 | 0.00                  | 0.00                 | 0.00                |
| 2,360.0             | 15.17           | 271.24      | 2,330.2             | 5.6        | -257.2     | 257.3                 | 0.00                  | 0.00                 | 0.00                |
| 2,400.0             | 15.17           | 271.24      | 2,368.8             | 5.8        | -267.7     | 267.7                 | 0.00                  | 0.00                 | 0.00                |
| 2,440.0             | 15.17           | 271.24      | 2,407.4             | 6.0        | -278.1     | 278.2                 | 0.00                  | 0.00                 | 0.00                |
| 2,480.0             | 15.17           | 271.24      | 2,446.0             | 6.2        | -288.6     | 288.7                 | 0.00                  | 0.00                 | 0.00                |
| 2,520.0             | 15.17           | 271.24      | 2,484.6             | 6.5        | -299.1     | 299.2                 | 0.00                  | 0.00                 | 0.00                |
| 2,560.0             | 15.17           | 271.24      | 2,523.2             | 6.7        | -309.5     | 309.6                 | 0.00                  | 0.00                 | 0.00                |
| 2,600.0             | 15.17           | 271.24      | 2,561.8             | 6.9        | -320.0     | 320.1                 | 0.00                  | 0.00                 | 0.00                |
| 2,640.0             | 15.17           | 271.24      | 2,600.4             | 7.1        | -330.5     | 330.6                 | 0.00                  | 0.00                 | 0.00                |
| 2,680.0             | 15.17           | 271.24      | 2,639.0             | 7.4        | -341.0     | 341.0                 | 0.00                  | 0.00                 | 0.00                |
| 2,720.0             | 15.17           | 271.24      | 2,677.6             | 7.6        | -351.4     | 351.5                 | 0.00                  | 0.00                 | 0.00                |
| 2,760.0             | 15.17           | 271.24      | 2,716.3             | 7.8        | -361.9     | 362.0                 | 0.00                  | 0.00                 | 0.00                |
| 2,800.0             | 15.17           | 271.24      | 2,754.9             | 8.0        | -372.4     | 372.4                 | 0.00                  | 0.00                 | 0.00                |
| 2,840.0             | 15.17           | 271.24      | 2,793.5             | 8.3        | -382.8     | 382.9                 | 0.00                  | 0.00                 | 0.00                |
| 2,880.0             | 15.17           | 271.24      | 2,832.1             | 8.5        | -393.3     | 393.4                 | 0.00                  | 0.00                 | 0.00                |
| 2,920.0             | 15.17           | 271.24      | 2,870.7             | 8.7        | -403.8     | 403.9                 | 0.00                  | 0.00                 | 0.00                |
| 2,960.0             | 15.17           | 271.24      | 2,909.3             | 8.9        | -414.2     | 414.3                 | 0.00                  | 0.00                 | 0.00                |
| 3,000.0             | 15.17           | 271.24      | 2,947.9             | 9.2        | -424.7     | 424.8                 | 0.00                  | 0.00                 | 0.00                |
| 3,040.0             | 15.17           | 271.24      | 2,986.5             | 9.4        | -435.2     | 435.3                 | 0.00                  | 0.00                 | 0.00                |
| 3,080.0             | 15.17           | 271.24      | 3,025.1             | 9.6        | -445.6     | 445.7                 | 0.00                  | 0.00                 | 0.00                |
| 3,120.0             | 15.17           | 271.24      | 3,063.7             | 9.9        | -456.1     | 456.2                 | 0.00                  | 0.00                 | 0.00                |
| 3,160.0             | 15.17           | 271.24      | 3,102.3             | 10.1       | -466.6     | 466.7                 | 0.00                  | 0.00                 | 0.00                |
| 3,200.0             | 15.17           | 271.24      | 3,140.9             | 10.3       | -477.0     | 477.1                 | 0.00                  | 0.00                 | 0.00                |
| 3,240.0             | 15.17           | 271.24      | 3,179.5             | 10.5       | -487.5     | 487.6                 | 0.00                  | 0.00                 | 0.00                |
| 3,280.0             | 15.17           | 271.24      | 3,218.1             | 10.8       | -498.0     | 498.1                 | 0.00                  | 0.00                 | 0.00                |
| 3,320.0             | 15.17           | 271.24      | 3,256.7             | 11.0       | -508.4     | 508.6                 | 0.00                  | 0.00                 | 0.00                |
| 3,360.0             | 15.17           | 271.24      | 3,295.3             | 11.2       | -518.9     | 519.0                 | 0.00                  | 0.00                 | 0.00                |
| 3,400.0             | 15.17           | 271.24      | 3,333.9             | 11.4       | -529.4     | 529.5                 | 0.00                  | 0.00                 | 0.00                |
| 3,440.0             | 15.17           | 271.24      | 3,372.5             | 11.7       | -539.8     | 540.0                 | 0.00                  | 0.00                 | 0.00                |
| 3,480.0             | 15.17           | 271.24      | 3,411.1             | 11.9       | -550.3     | 550.4                 | 0.00                  | 0.00                 | 0.00                |
| 3,520.0             | 15.17           | 271.24      | 3,449.8             | 12.1       | -560.8     | 560.9                 | 0.00                  | 0.00                 | 0.00                |
| 3,560.0             | 15.17           | 271.24      | 3,488.4             | 12.3       | -571.2     | 571.4                 | 0.00                  | 0.00                 | 0.00                |
| 3,600.0             | 15.17           | 271.24      | 3,527.0             | 12.6       | -581.7     | 581.8                 | 0.00                  | 0.00                 | 0.00                |
| 3,640.0             | 15.17           | 271.24      | 3,565.6             | 12.8       | -592.2     | 592.3                 | 0.00                  | 0.00                 | 0.00                |
| 3,680.0             | 15.17           | 271.24      | 3,604.2             | 13.0       | -602.6     | 602.8                 | 0.00                  | 0.00                 | 0.00                |
| 3,720.0             | 15.17           | 271.24      | 3,642.8             | 13.2       | -613.1     | 613.3                 | 0.00                  | 0.00                 | 0.00                |
| 3,760.0             | 15.17           | 271.24      | 3,681.4             | 13.5       | -623.6     | 623.7                 | 0.00                  | 0.00                 | 0.00                |
| 3,800.0             | 15.17           | 271.24      | 3,720.0             | 13.7       | -634.0     | 634.2                 | 0.00                  | 0.00                 | 0.00                |
| 3,840.0             | 15.17           | 271.24      | 3,758.6             | 13.9       | -644.5     | 644.7                 | 0.00                  | 0.00                 | 0.00                |
| 3,880.0             | 15.17           | 271.24      | 3,797.2             | 14.1       | -655.0     | 655.1                 | 0.00                  | 0.00                 | 0.00                |
| 3,920.0             | 15.17           | 271.24      | 3,835.8             | 14.4       | -665.4     | 665.6                 | 0.00                  | 0.00                 | 0.00                |
| 3,960.0             | 15.17           | 271.24      | 3,874.4             | 14.6       | -675.9     | 676.1                 | 0.00                  | 0.00                 | 0.00                |
| 4,000.0             | 15.17           | 271.24      | 3,913.0             | 14.8       | -686.4     | 686.5                 | 0.00                  | 0.00                 | 0.00                |
| 4,040.0             | 15.17           | 271.24      | 3,951.6             | 15.1       | -696.8     | 697.0                 | 0.00                  | 0.00                 | 0.00                |
| 4,080.0             | 15.17           | 271.24      | 3,990.2             | 15.3       | -707.3     | 707.5                 | 0.00                  | 0.00                 | 0.00                |
| 4,120.0             | 15.17           | 271.24      | 4,028.8             | 15.5       | -717.8     | 718.0                 | 0.00                  | 0.00                 | 0.00                |
| 4,160.0             | 15.17           | 271.24      | 4,067.4             | 15.7       | -728.3     | 728.4                 | 0.00                  | 0.00                 | 0.00                |

Database: Landmark  
Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.6-T3N-R64W  
Site: Shelton PC D06-32D Pad Sec.6-T3N-R64W  
Well: Smith PC D06-20D  
Wellbore: Wellbore #1  
Design: Noble Smith PC D06-20D Plan #1 (06-15-10)

Local Co-ordinate Reference: Well Smith PC D06-20D  
TVD Reference: WELL @ 4836.0ft (Original Well Elev)  
MD Reference: WELL @ 4836.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature

## 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) |
|-------------------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 4,200.0                       | 15.17           | 271.24      | 4,106.0             | 16.0       | -738.7     | 738.9                 | 0.00                  | 0.00                 | 0.00                |
| 4,240.0                       | 15.17           | 271.24      | 4,144.7             | 16.2       | -749.2     | 749.4                 | 0.00                  | 0.00                 | 0.00                |
| 4,280.0                       | 15.17           | 271.24      | 4,183.3             | 16.4       | -759.7     | 759.8                 | 0.00                  | 0.00                 | 0.00                |
| 4,320.0                       | 15.17           | 271.24      | 4,221.9             | 16.6       | -770.1     | 770.3                 | 0.00                  | 0.00                 | 0.00                |
| 4,360.0                       | 15.17           | 271.24      | 4,260.5             | 16.9       | -780.6     | 780.8                 | 0.00                  | 0.00                 | 0.00                |
| 4,400.0                       | 15.17           | 271.24      | 4,299.1             | 17.1       | -791.1     | 791.2                 | 0.00                  | 0.00                 | 0.00                |
| 4,440.0                       | 15.17           | 271.24      | 4,337.7             | 17.3       | -801.5     | 801.7                 | 0.00                  | 0.00                 | 0.00                |
| 4,480.0                       | 15.17           | 271.24      | 4,376.3             | 17.5       | -812.0     | 812.2                 | 0.00                  | 0.00                 | 0.00                |
| 4,520.0                       | 15.17           | 271.24      | 4,414.9             | 17.8       | -822.5     | 822.7                 | 0.00                  | 0.00                 | 0.00                |
| 4,560.0                       | 15.17           | 271.24      | 4,453.5             | 18.0       | -832.9     | 833.1                 | 0.00                  | 0.00                 | 0.00                |
| 4,600.0                       | 15.17           | 271.24      | 4,492.1             | 18.2       | -843.4     | 843.6                 | 0.00                  | 0.00                 | 0.00                |
| 4,640.0                       | 15.17           | 271.24      | 4,530.7             | 18.4       | -853.9     | 854.1                 | 0.00                  | 0.00                 | 0.00                |
| 4,680.0                       | 15.17           | 271.24      | 4,569.3             | 18.7       | -864.3     | 864.5                 | 0.00                  | 0.00                 | 0.00                |
| 4,720.0                       | 15.17           | 271.24      | 4,607.9             | 18.9       | -874.8     | 875.0                 | 0.00                  | 0.00                 | 0.00                |
| 4,760.0                       | 15.17           | 271.24      | 4,646.5             | 19.1       | -885.3     | 885.5                 | 0.00                  | 0.00                 | 0.00                |
| 4,800.0                       | 15.17           | 271.24      | 4,685.1             | 19.3       | -895.7     | 895.9                 | 0.00                  | 0.00                 | 0.00                |
| 4,840.0                       | 15.17           | 271.24      | 4,723.7             | 19.6       | -906.2     | 906.4                 | 0.00                  | 0.00                 | 0.00                |
| 4,867.4                       | 15.17           | 271.24      | 4,750.1             | 19.7       | -913.4     | 913.6                 | 0.00                  | 0.00                 | 0.00                |
| 4,880.0                       | 14.92           | 271.24      | 4,762.3             | 19.8       | -916.6     | 916.9                 | 2.00                  | -2.00                | 0.00                |
| 4,920.0                       | 14.12           | 271.24      | 4,801.1             | 20.0       | -926.7     | 926.9                 | 2.00                  | -2.00                | 0.00                |
| 4,960.0                       | 13.32           | 271.24      | 4,839.9             | 20.2       | -936.2     | 936.4                 | 2.00                  | -2.00                | 0.00                |
| 5,000.0                       | 12.52           | 271.24      | 4,878.9             | 20.4       | -945.1     | 945.3                 | 2.00                  | -2.00                | 0.00                |
| 5,040.0                       | 11.72           | 271.24      | 4,918.0             | 20.6       | -953.5     | 953.7                 | 2.00                  | -2.00                | 0.00                |
| 5,080.0                       | 10.92           | 271.24      | 4,957.2             | 20.8       | -961.3     | 961.6                 | 2.00                  | -2.00                | 0.00                |
| 5,120.0                       | 10.12           | 271.24      | 4,996.6             | 20.9       | -968.6     | 968.9                 | 2.00                  | -2.00                | 0.00                |
| 5,160.0                       | 9.32            | 271.24      | 5,036.0             | 21.1       | -975.4     | 975.6                 | 2.00                  | -2.00                | 0.00                |
| 5,200.0                       | 8.52            | 271.24      | 5,075.5             | 21.2       | -981.6     | 981.8                 | 2.00                  | -2.00                | 0.00                |
| 5,240.0                       | 7.72            | 271.24      | 5,115.1             | 21.3       | -987.2     | 987.5                 | 2.00                  | -2.00                | 0.00                |
| 5,280.0                       | 6.92            | 271.24      | 5,154.8             | 21.4       | -992.3     | 992.6                 | 2.00                  | -2.00                | 0.00                |
| 5,320.0                       | 6.12            | 271.24      | 5,194.5             | 21.5       | -996.9     | 997.1                 | 2.00                  | -2.00                | 0.00                |
| 5,360.0                       | 5.32            | 271.24      | 5,234.3             | 21.6       | -1,000.9   | 1,001.1               | 2.00                  | -2.00                | 0.00                |
| 5,400.0                       | 4.52            | 271.24      | 5,274.2             | 21.7       | -1,004.3   | 1,004.5               | 2.00                  | -2.00                | 0.00                |
| 5,440.0                       | 3.72            | 271.24      | 5,314.1             | 21.8       | -1,007.2   | 1,007.4               | 2.00                  | -2.00                | 0.00                |
| 5,480.0                       | 2.92            | 271.24      | 5,354.0             | 21.8       | -1,009.5   | 1,009.7               | 2.00                  | -2.00                | 0.00                |
| 5,520.0                       | 2.12            | 271.24      | 5,394.0             | 21.8       | -1,011.3   | 1,011.5               | 2.00                  | -2.00                | 0.00                |
| 5,560.0                       | 1.32            | 271.24      | 5,433.9             | 21.9       | -1,012.5   | 1,012.7               | 2.00                  | -2.00                | 0.00                |
| 5,600.0                       | 0.52            | 271.24      | 5,473.9             | 21.9       | -1,013.1   | 1,013.3               | 2.00                  | -2.00                | 0.00                |
| 5,626.1                       | 0.00            | 0.00        | 5,500.0             | 21.9       | -1,013.2   | 1,013.5               | 2.00                  | -2.00                | 0.00                |
| TARGET BHL 2550'FSL, 1320'FWL |                 |             |                     |            |            |                       |                       |                      |                     |
| 5,640.0                       | 0.00            | 0.00        | 5,513.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,680.0                       | 0.00            | 0.00        | 5,553.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,720.0                       | 0.00            | 0.00        | 5,593.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,760.0                       | 0.00            | 0.00        | 5,633.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,800.0                       | 0.00            | 0.00        | 5,673.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,840.0                       | 0.00            | 0.00        | 5,713.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,880.0                       | 0.00            | 0.00        | 5,753.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,920.0                       | 0.00            | 0.00        | 5,793.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 5,960.0                       | 0.00            | 0.00        | 5,833.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,000.0                       | 0.00            | 0.00        | 5,873.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,040.0                       | 0.00            | 0.00        | 5,913.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,080.0                       | 0.00            | 0.00        | 5,953.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,120.0                       | 0.00            | 0.00        | 5,993.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,160.0                       | 0.00            | 0.00        | 6,033.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,200.0                       | 0.00            | 0.00        | 6,073.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |



**Database:** Landmark  
**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.6-T3N-R64W  
**Site:** Shelton PC D06-32D Pad Sec.6-T3N-R64W  
**Well:** Smith PC D06-20D  
**Wellbore:** Wellbore #1  
**Design:** Noble Smith PC D06-20D Plan #1 (06-15-10)

**Local Co-ordinate Reference:** Well Smith PC D06-20D  
**TVD Reference:** WELL @ 4836.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4836.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

### 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) |
|--|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 6,240.0  | 0.00            | 0.00        | 6,113.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,280.0  | 0.00            | 0.00        | 6,153.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,320.0  | 0.00            | 0.00        | 6,193.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,360.0  | 0.00            | 0.00        | 6,233.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,400.0  | 0.00            | 0.00        | 6,273.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,440.0  | 0.00            | 0.00        | 6,313.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,480.0  | 0.00            | 0.00        | 6,353.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,520.0  | 0.00            | 0.00        | 6,393.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,560.0  | 0.00            | 0.00        | 6,433.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,600.0  | 0.00            | 0.00        | 6,473.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,640.0  | 0.00            | 0.00        | 6,513.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,680.0  | 0.00            | 0.00        | 6,553.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,720.0  | 0.00            | 0.00        | 6,593.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,760.0  | 0.00            | 0.00        | 6,633.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,800.0  | 0.00            | 0.00        | 6,673.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,840.0  | 0.00            | 0.00        | 6,713.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,872.1  | 0.00            | 0.00        | 6,746.0             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| <b>NIOBRARA - TARGET CIRCLE 2550'FSL, 1320'FWL</b> |                 |             |                     |            |            |                       |                       |                      |                     |
| 6,880.0  | 0.00            | 0.00        | 6,753.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,920.0  | 0.00            | 0.00        | 6,793.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 6,960.0  | 0.00            | 0.00        | 6,833.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,000.0  | 0.00            | 0.00        | 6,873.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,040.0  | 0.00            | 0.00        | 6,913.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,080.0  | 0.00            | 0.00        | 6,953.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,120.0  | 0.00            | 0.00        | 6,993.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,160.0  | 0.00            | 0.00        | 7,033.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,200.0  | 0.00            | 0.00        | 7,073.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,212.1  | 0.00            | 0.00        | 7,086.0             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| <b>CODELL</b>                                      |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,240.0  | 0.00            | 0.00        | 7,113.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,280.0  | 0.00            | 0.00        | 7,153.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,320.0  | 0.00            | 0.00        | 7,193.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,360.0  | 0.00            | 0.00        | 7,233.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,400.0  | 0.00            | 0.00        | 7,273.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,440.0  | 0.00            | 0.00        | 7,313.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,480.0  | 0.00            | 0.00        | 7,353.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,520.0  | 0.00            | 0.00        | 7,393.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,560.0  | 0.00            | 0.00        | 7,433.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,582.1  | 0.00            | 0.00        | 7,456.0             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| <b>D-SAND</b>                                      |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,600.0  | 0.00            | 0.00        | 7,473.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,640.0  | 0.00            | 0.00        | 7,513.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,662.1  | 0.00            | 0.00        | 7,536.0             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| <b>J-SAND</b>                                      |                 |             |                     |            |            |                       |                       |                      |                     |
| 7,680.0  | 0.00            | 0.00        | 7,553.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,720.0  | 0.00            | 0.00        | 7,593.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,760.0  | 0.00            | 0.00        | 7,633.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,800.0  | 0.00            | 0.00        | 7,673.9             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| 7,812.1  | 0.00            | 0.00        | 7,686.0             | 21.9       | -1,013.2   | 1,013.5               | 0.00                  | 0.00                 | 0.00                |
| <b>HARDLINE 98'N OF BHL</b>                        |                 |             |                     |            |            |                       |                       |                      |                     |

**Database:** Landmark  
**Company:** NOBLE ENERGY INC WELD COUNTY CO  
**Project:** SEC.6-T3N-R64W  
**Site:** Shelton PC D06-32D Pad Sec.6-T3N-R64W  
**Well:** Smith PC D06-20D  
**Wellbore:** Wellbore #1  
**Design:** Noble Smith PC D06-20D Plan #1 (06-15-10)

**Local Co-ordinate Reference:** Well Smith PC D06-20D  
**TVD Reference:** WELL @ 4836.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4836.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature

## Targets

| Target Name   | Dip Angle<br>(°) | Dip Dir.<br>(°) | TVD<br>(ft) | +N/-S<br>(ft) | +E/-W<br>(ft) | Northing<br>(ft) | Easting<br>(ft) | Latitude         | Longitude         |
|---|------------------|-----------------|-------------|---------------|---------------|------------------|-----------------|------------------|-------------------|
| - hit/miss target   |                  |                 |             |               |               |                  |                 |                  |                   |
| - Shape   |                  |                 |             |               |               |                  |                 |                  |                   |
| HARDLINE 98'N OF E  | 0.00             | 0.00            | 7,686.0     | 119.9         | -1,113.2      | 1,336,759.24     | 3,251,721.74    | 40° 15' 15.440 N | 104° 35' 53.190 W |
| - plan misses by 140.0ft at 7812.1ft MD (7686.0 TVD, 21.9 N, -1013.2 E) |                  |                 |             |               |               |                  |                 |                  |                   |
| - Polygon   |                  |                 |             |               |               |                  |                 |                  |                   |
| Point 1   |                  |                 | 7,686.0     | 0.0           | 0.0           | 1,336,759.24     | 3,251,721.74    |                  |                   |
| Point 2   |                  |                 | 7,686.0     | 0.0           | 200.0         | 1,336,761.28     | 3,251,921.72    |                  |                   |
| TARGET BHL 2550'F   | 0.00             | 0.00            | 5,500.0     | 21.9          | -1,013.2      | 1,336,662.26     | 3,251,822.71    | 40° 15' 14.472 N | 104° 35' 51.900 W |
| - plan hits target  |                  |                 |             |               |               |                  |                 |                  |                   |
| - Point   |                  |                 |             |               |               |                  |                 |                  |                   |
| TARGET CIRCLE 25'   | 0.00             | 0.00            | 6,746.0     | 21.9          | -1,013.2      | 1,336,662.27     | 3,251,822.73    | 40° 15' 14.472 N | 104° 35' 51.900 W |
| - plan hits target  |                  |                 |             |               |               |                  |                 |                  |                   |
| - Circle (radius 75.0)  |                  |                 |             |               |               |                  |                 |                  |                   |

## Casing Points

| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Name   | Casing<br>Diameter<br>(") | Hole<br>Diameter<br>(") |
|---------------------------|---------------------------|--------|---------------------------|-------------------------|
| 650.0                     | 650.0                     | 8 5/8" | 8-5/8                     | 12-1/4                  |

## Formations

| Measured<br>Depth<br>(ft) | Vertical<br>Depth<br>(ft) | Name     | Lithology | Dip<br>(°) | Dip<br>Direction<br>(°) |
|---------------------------|---------------------------|----------|-----------|------------|-------------------------|
| 6,872.1                   | 6,746.0                   | NIOBRARA |           | 0.00       |                         |
| 7,212.1                   | 7,086.0                   | CODELL   |           | 0.00       |                         |
| 7,582.1                   | 7,456.0                   | D-SAND   |           | 0.00       |                         |
| 7,662.1                   | 7,536.0                   | J-SAND   |           | 0.00       |                         |