

ENSIGN

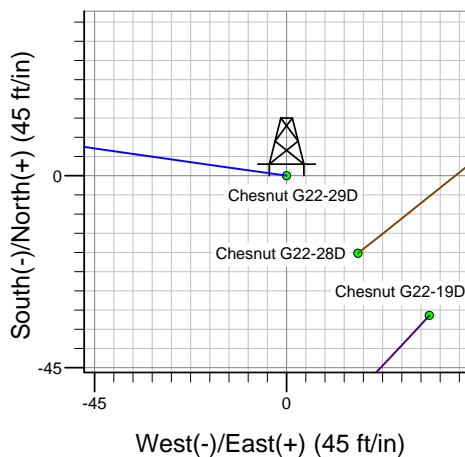
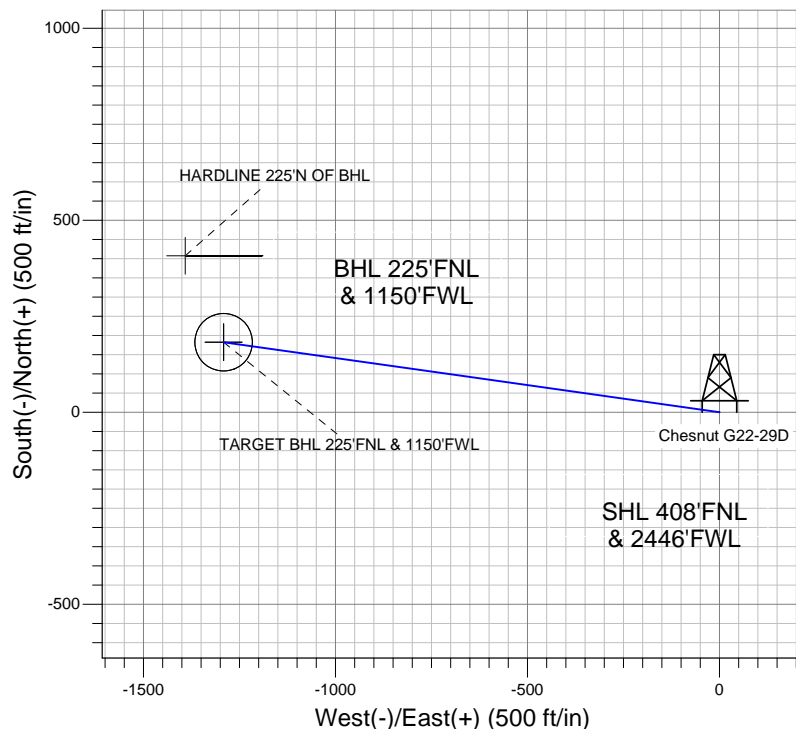
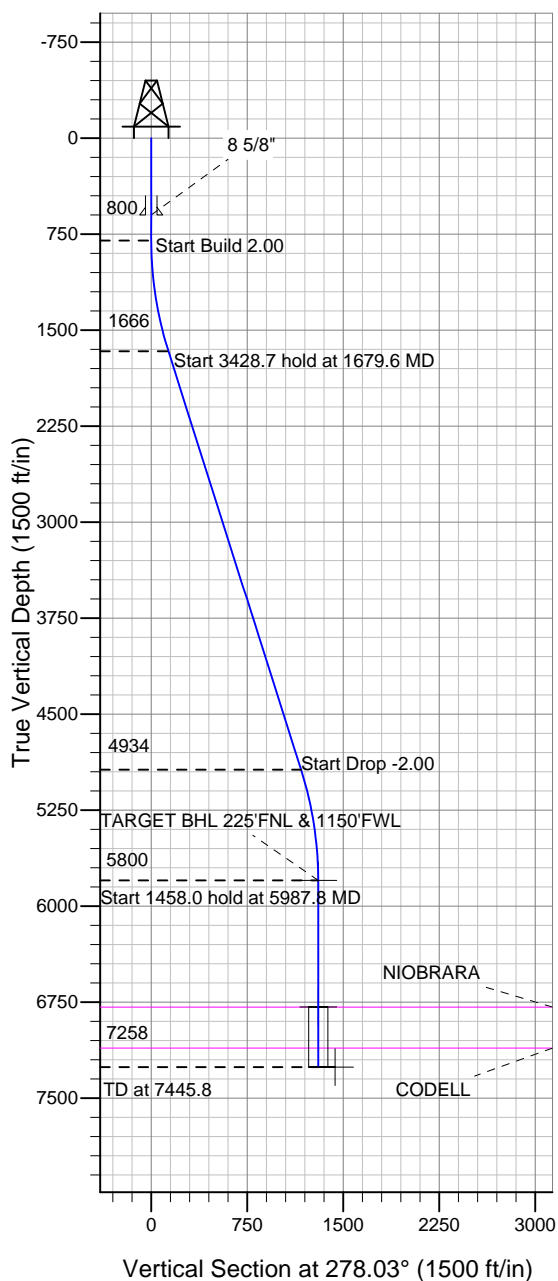
Directional

Well Name: Chesnut G22-29D

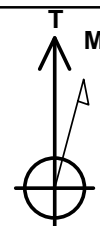
Surface Location: Chesnut G22-29D Pad Sec.22-T4N-R65W
North American Datum 1983, US State Plane 1983 Colorado Northern Zone
Ground Elevation: 4735.0

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude | Slot |
|--------------------------------------|-------|------------|------------|-----------|-------------|------|
| 0.0 | 0.0 | 1354742.93 | 3237093.12 | 40.304050 | -104.649900 | |
| Original Well Elev | | | | | | |
| WELL @ 4748.0ft (Original Well Elev) | | | | | | |

NOBLE ENERGY INC WELD COUNTY CO



Chesnut G22-29D Pad Sec.22-T4N-R65W
Chesnut G22-29D
Noble Chesnut G22-29D Plan #3 (2-7-12)
14:19, February 08 2012



Azimuths to True North
Magnetic North: 8.66°
Magnetic Field
Strength: 53048.9snT
Dip Angle: 66.98°
Date: 2/8/2012
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|----------------------------------|--------|-------|---------|-----------|-------------|-----------------------|
| TARGET BHL 225'FNL & 1150'FWL | 5800.0 | 182.2 | -1291.4 | 40.304550 | -104.654530 | Point |
| TARGET CIRCLE 225'FNL & 1150'FWL | 6788.0 | 182.2 | -1291.4 | 40.304550 | -104.654530 | Circle (Radius: 75.0) |
| HARDLINE 225'N OF BHL | 7258.0 | 407.2 | -1391.4 | 40.305168 | -104.654889 | 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 | 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.0 | |
| 3 | 1679.6 | 17.59 | 278.03 | 1665.8 | 18.7 | -132.7 | 2.00 | 278.03 | 134.0 | |
| 4 | 5108.3 | 17.59 | 278.03 | 4934.2 | 163.5 | -1158.7 | 0.00 | 0.00 | 1170.2 | |
| 5 | 5987.8 | 0.00 | 0.00 | 5800.0 | 182.2 | -1291.4 | 2.00 | 180.00 | 1304.2 | |
| 6 | 7445.8 | 0.00 | 0.00 | 7258.0 | 182.2 | -1291.4 | 0.00 | 0.00 | 1304.2 | TARGET BHL 225'FNL & 1150'FWL |



NOBLE ENERGY INC WELD COUNTY CO

SEC.22-T4N-R65W

Chesnut G22-29D Pad Sec.22-T4N-R65W

Chesnut G22-29D

Wellbore #1

Plan: Noble Chesnut G22-29D Plan #3 (2-7-12)

Standard Planning Report

08 February, 2012



| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Chesnut G22-29D |
| Company: | NOBLE ENERGY INC WELD COUNTY CO | TVD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Project: | SEC.22-T4N-R65W | MD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Site: | Chesnut G22-29D Pad Sec.22-T4N-R65W | North Reference: | True |
| Well: | Chesnut G22-29D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Noble Chesnut G22-29D Plan #3 (2-7-12) | | |

| | | | |
|--------------------|--|----------------------|-----------------------------|
| Project | SEC.22-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 | | | | | | Chesnut G22-29D Pad Sec.22-T4N-R65W | | | | | | | | | | | |
| Site Position: | | | | | | Northing: | | | 1,354,728.53 ft | | | Latitude: | | | 40.304010 | | |
| From: | | | Lat/Long | | | Easting: | | | 3,237,109.99 ft | | | Longitude: | | | -104.649840 | | |
| Position Uncertainty: | | | 0.0 ft | | | Slot Radius: | | | " | | | Grid Convergence: | | | 0.55 ° | | |

| Well | Chesnut G22-29D | | | | | |
|----------------------|-----------------|----------|---------------------|-----------------|---------------|-------------|
| Well Position | +N/-S | 14.6 ft | Northing: | 1,354,742.93 ft | Latitude: | 40.304050 |
| | +E/-W | -16.7 ft | Easting: | 3,237,093.12 ft | Longitude: | -104.649900 |
| Position Uncertainty | | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,735.0 ft |

| | | | | | |
|------------------|-------------------|--------------------|------------------------|----------------------|----------------------------|
| Wellbore | Wellbore #1 | | | | |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
| | IGRF200510 | 11/17/2008 | 9.11 | 67.09 | 53,383 |
| | IGRF200510 | 2/8/2012 | 8.66 | 66.98 | 53,049 |

| | | | | |
|--------------------------|--|-------------------|----------------------|----------------------|
| Design | Noble Chesnut G22-29D Plan #3 (2-7-12) | | | |
| Audit Notes: | | | | |
| Version: | Phase: | PROTOTYPE | Tie On Depth: | 0.0 |
| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
| | 0.0 | 0.0 | 0.0 | 278.03 |

| | | | | | | | | | | |
|----------------------------|------------------------|--------------------|----------------------------|-------------------|-------------------|------------------------------|-----------------------------|----------------------------|----------------|------------------|
| 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 | |
| 800.0 | 0.00 | 0.00 | 800.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 1,679.6 | 17.59 | 278.03 | 1,665.8 | 18.7 | -132.7 | 2.00 | 2.00 | 0.00 | 278.03 | |
| 5,108.3 | 17.59 | 278.03 | 4,934.2 | 163.5 | -1,158.7 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 5,987.8 | 0.00 | 0.00 | 5,800.0 | 182.2 | -1,291.4 | 2.00 | -2.00 | 0.00 | 180.00 | TARGET BHL 225'I |
| 7,445.8 | 0.00 | 0.00 | 7,258.0 | 182.2 | -1,291.4 | 0.00 | 0.00 | 0.00 | 0.00 | |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Chesnut G22-29D |
| Company: | NOBLE ENERGY INC WELD COUNTY CO | TVD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Project: | SEC.22-T4N-R65W | MD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Site: | Chesnut G22-29D Pad Sec.22-T4N-R65W | North Reference: | True |
| Well: | Chesnut G22-29D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Noble Chesnut G22-29D Plan #3 (2-7-12) | | |

| 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 |
| 8 5/8" | | | | | | | | | |
| 640.0 | 0.00 | 0.00 | 640.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 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 | 0.80 | 278.03 | 840.0 | 0.0 | -0.3 | 0.3 | 2.00 | 2.00 | 0.00 |
| 880.0 | 1.60 | 278.03 | 880.0 | 0.2 | -1.1 | 1.1 | 2.00 | 2.00 | 0.00 |
| 920.0 | 2.40 | 278.03 | 920.0 | 0.4 | -2.5 | 2.5 | 2.00 | 2.00 | 0.00 |
| 960.0 | 3.20 | 278.03 | 959.9 | 0.6 | -4.4 | 4.5 | 2.00 | 2.00 | 0.00 |
| 1,000.0 | 4.00 | 278.03 | 999.8 | 1.0 | -6.9 | 7.0 | 2.00 | 2.00 | 0.00 |
| 1,040.0 | 4.80 | 278.03 | 1,039.7 | 1.4 | -9.9 | 10.0 | 2.00 | 2.00 | 0.00 |
| 1,080.0 | 5.60 | 278.03 | 1,079.6 | 1.9 | -13.5 | 13.7 | 2.00 | 2.00 | 0.00 |
| 1,120.0 | 6.40 | 278.03 | 1,119.3 | 2.5 | -17.7 | 17.9 | 2.00 | 2.00 | 0.00 |
| 1,160.0 | 7.20 | 278.03 | 1,159.1 | 3.2 | -22.4 | 22.6 | 2.00 | 2.00 | 0.00 |
| 1,200.0 | 8.00 | 278.03 | 1,198.7 | 3.9 | -27.6 | 27.9 | 2.00 | 2.00 | 0.00 |
| 1,240.0 | 8.80 | 278.03 | 1,238.3 | 4.7 | -33.4 | 33.7 | 2.00 | 2.00 | 0.00 |
| 1,280.0 | 9.60 | 278.03 | 1,277.8 | 5.6 | -39.7 | 40.1 | 2.00 | 2.00 | 0.00 |
| 1,320.0 | 10.40 | 278.03 | 1,317.1 | 6.6 | -46.6 | 47.1 | 2.00 | 2.00 | 0.00 |
| 1,360.0 | 11.20 | 278.03 | 1,356.4 | 7.6 | -54.0 | 54.6 | 2.00 | 2.00 | 0.00 |
| 1,400.0 | 12.00 | 278.03 | 1,395.6 | 8.7 | -62.0 | 62.6 | 2.00 | 2.00 | 0.00 |
| 1,440.0 | 12.80 | 278.03 | 1,434.7 | 9.9 | -70.5 | 71.2 | 2.00 | 2.00 | 0.00 |
| 1,480.0 | 13.60 | 278.03 | 1,473.6 | 11.2 | -79.5 | 80.3 | 2.00 | 2.00 | 0.00 |
| 1,520.0 | 14.40 | 278.03 | 1,512.4 | 12.6 | -89.1 | 90.0 | 2.00 | 2.00 | 0.00 |
| 1,560.0 | 15.20 | 278.03 | 1,551.1 | 14.0 | -99.2 | 100.2 | 2.00 | 2.00 | 0.00 |
| 1,600.0 | 16.00 | 278.03 | 1,589.6 | 15.5 | -109.9 | 111.0 | 2.00 | 2.00 | 0.00 |
| 1,640.0 | 16.80 | 278.03 | 1,628.0 | 17.1 | -121.1 | 122.3 | 2.00 | 2.00 | 0.00 |
| 1,679.6 | 17.59 | 278.03 | 1,665.8 | 18.7 | -132.7 | 134.0 | 2.00 | 2.00 | 0.00 |
| 1,680.0 | 17.59 | 278.03 | 1,666.2 | 18.7 | -132.8 | 134.1 | 0.00 | 0.00 | 0.00 |
| 1,720.0 | 17.59 | 278.03 | 1,704.4 | 20.4 | -144.8 | 146.2 | 0.00 | 0.00 | 0.00 |
| 1,760.0 | 17.59 | 278.03 | 1,742.5 | 22.1 | -156.7 | 158.3 | 0.00 | 0.00 | 0.00 |
| 1,800.0 | 17.59 | 278.03 | 1,780.6 | 23.8 | -168.7 | 170.4 | 0.00 | 0.00 | 0.00 |
| 1,840.0 | 17.59 | 278.03 | 1,818.7 | 25.5 | -180.7 | 182.5 | 0.00 | 0.00 | 0.00 |
| 1,880.0 | 17.59 | 278.03 | 1,856.9 | 27.2 | -192.6 | 194.5 | 0.00 | 0.00 | 0.00 |
| 1,920.0 | 17.59 | 278.03 | 1,895.0 | 28.9 | -204.6 | 206.6 | 0.00 | 0.00 | 0.00 |
| 1,960.0 | 17.59 | 278.03 | 1,933.1 | 30.6 | -216.6 | 218.7 | 0.00 | 0.00 | 0.00 |
| 2,000.0 | 17.59 | 278.03 | 1,971.3 | 32.2 | -228.5 | 230.8 | 0.00 | 0.00 | 0.00 |
| 2,040.0 | 17.59 | 278.03 | 2,009.4 | 33.9 | -240.5 | 242.9 | 0.00 | 0.00 | 0.00 |

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|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Chesnut G22-29D |
| Company: | NOBLE ENERGY INC WELD COUNTY CO | TVD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Project: | SEC.22-T4N-R65W | MD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Site: | Chesnut G22-29D Pad Sec.22-T4N-R65W | North Reference: | True |
| Well: | Chesnut G22-29D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Noble Chesnut G22-29D Plan #3 (2-7-12) | | |

| 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) |
| 2,080.0 | 17.59 | 278.03 | 2,047.5 | 35.6 | -252.5 | 255.0 | 0.00 | 0.00 | 0.00 |
| 2,120.0 | 17.59 | 278.03 | 2,085.7 | 37.3 | -264.5 | 267.1 | 0.00 | 0.00 | 0.00 |
| 2,160.0 | 17.59 | 278.03 | 2,123.8 | 39.0 | -276.4 | 279.2 | 0.00 | 0.00 | 0.00 |
| 2,200.0 | 17.59 | 278.03 | 2,161.9 | 40.7 | -288.4 | 291.3 | 0.00 | 0.00 | 0.00 |
| 2,240.0 | 17.59 | 278.03 | 2,200.0 | 42.4 | -300.4 | 303.3 | 0.00 | 0.00 | 0.00 |
| 2,280.0 | 17.59 | 278.03 | 2,238.2 | 44.1 | -312.3 | 315.4 | 0.00 | 0.00 | 0.00 |
| 2,320.0 | 17.59 | 278.03 | 2,276.3 | 45.8 | -324.3 | 327.5 | 0.00 | 0.00 | 0.00 |
| 2,360.0 | 17.59 | 278.03 | 2,314.4 | 47.4 | -336.3 | 339.6 | 0.00 | 0.00 | 0.00 |
| 2,400.0 | 17.59 | 278.03 | 2,352.6 | 49.1 | -348.2 | 351.7 | 0.00 | 0.00 | 0.00 |
| 2,440.0 | 17.59 | 278.03 | 2,390.7 | 50.8 | -360.2 | 363.8 | 0.00 | 0.00 | 0.00 |
| 2,480.0 | 17.59 | 278.03 | 2,428.8 | 52.5 | -372.2 | 375.9 | 0.00 | 0.00 | 0.00 |
| 2,520.0 | 17.59 | 278.03 | 2,466.9 | 54.2 | -384.2 | 388.0 | 0.00 | 0.00 | 0.00 |
| 2,560.0 | 17.59 | 278.03 | 2,505.1 | 55.9 | -396.1 | 400.1 | 0.00 | 0.00 | 0.00 |
| 2,600.0 | 17.59 | 278.03 | 2,543.2 | 57.6 | -408.1 | 412.1 | 0.00 | 0.00 | 0.00 |
| 2,640.0 | 17.59 | 278.03 | 2,581.3 | 59.3 | -420.1 | 424.2 | 0.00 | 0.00 | 0.00 |
| 2,680.0 | 17.59 | 278.03 | 2,619.5 | 61.0 | -432.0 | 436.3 | 0.00 | 0.00 | 0.00 |
| 2,720.0 | 17.59 | 278.03 | 2,657.6 | 62.6 | -444.0 | 448.4 | 0.00 | 0.00 | 0.00 |
| 2,760.0 | 17.59 | 278.03 | 2,695.7 | 64.3 | -456.0 | 460.5 | 0.00 | 0.00 | 0.00 |
| 2,800.0 | 17.59 | 278.03 | 2,733.9 | 66.0 | -468.0 | 472.6 | 0.00 | 0.00 | 0.00 |
| 2,840.0 | 17.59 | 278.03 | 2,772.0 | 67.7 | -479.9 | 484.7 | 0.00 | 0.00 | 0.00 |
| 2,880.0 | 17.59 | 278.03 | 2,810.1 | 69.4 | -491.9 | 496.8 | 0.00 | 0.00 | 0.00 |
| 2,920.0 | 17.59 | 278.03 | 2,848.2 | 71.1 | -503.9 | 508.9 | 0.00 | 0.00 | 0.00 |
| 2,960.0 | 17.59 | 278.03 | 2,886.4 | 72.8 | -515.8 | 520.9 | 0.00 | 0.00 | 0.00 |
| 3,000.0 | 17.59 | 278.03 | 2,924.5 | 74.5 | -527.8 | 533.0 | 0.00 | 0.00 | 0.00 |
| 3,040.0 | 17.59 | 278.03 | 2,962.6 | 76.2 | -539.8 | 545.1 | 0.00 | 0.00 | 0.00 |
| 3,080.0 | 17.59 | 278.03 | 3,000.8 | 77.8 | -551.7 | 557.2 | 0.00 | 0.00 | 0.00 |
| 3,120.0 | 17.59 | 278.03 | 3,038.9 | 79.5 | -563.7 | 569.3 | 0.00 | 0.00 | 0.00 |
| 3,160.0 | 17.59 | 278.03 | 3,077.0 | 81.2 | -575.7 | 581.4 | 0.00 | 0.00 | 0.00 |
| 3,200.0 | 17.59 | 278.03 | 3,115.1 | 82.9 | -587.7 | 593.5 | 0.00 | 0.00 | 0.00 |
| 3,240.0 | 17.59 | 278.03 | 3,153.3 | 84.6 | -599.6 | 605.6 | 0.00 | 0.00 | 0.00 |
| 3,280.0 | 17.59 | 278.03 | 3,191.4 | 86.3 | -611.6 | 617.7 | 0.00 | 0.00 | 0.00 |
| 3,320.0 | 17.59 | 278.03 | 3,229.5 | 88.0 | -623.6 | 629.7 | 0.00 | 0.00 | 0.00 |
| 3,360.0 | 17.59 | 278.03 | 3,267.7 | 89.7 | -635.5 | 641.8 | 0.00 | 0.00 | 0.00 |
| 3,400.0 | 17.59 | 278.03 | 3,305.8 | 91.4 | -647.5 | 653.9 | 0.00 | 0.00 | 0.00 |
| 3,440.0 | 17.59 | 278.03 | 3,343.9 | 93.0 | -659.5 | 666.0 | 0.00 | 0.00 | 0.00 |
| 3,480.0 | 17.59 | 278.03 | 3,382.1 | 94.7 | -671.4 | 678.1 | 0.00 | 0.00 | 0.00 |
| 3,520.0 | 17.59 | 278.03 | 3,420.2 | 96.4 | -683.4 | 690.2 | 0.00 | 0.00 | 0.00 |
| 3,560.0 | 17.59 | 278.03 | 3,458.3 | 98.1 | -695.4 | 702.3 | 0.00 | 0.00 | 0.00 |
| 3,600.0 | 17.59 | 278.03 | 3,496.4 | 99.8 | -707.4 | 714.4 | 0.00 | 0.00 | 0.00 |
| 3,640.0 | 17.59 | 278.03 | 3,534.6 | 101.5 | -719.3 | 726.5 | 0.00 | 0.00 | 0.00 |
| 3,680.0 | 17.59 | 278.03 | 3,572.7 | 103.2 | -731.3 | 738.5 | 0.00 | 0.00 | 0.00 |
| 3,720.0 | 17.59 | 278.03 | 3,610.8 | 104.9 | -743.3 | 750.6 | 0.00 | 0.00 | 0.00 |
| 3,760.0 | 17.59 | 278.03 | 3,649.0 | 106.6 | -755.2 | 762.7 | 0.00 | 0.00 | 0.00 |
| 3,800.0 | 17.59 | 278.03 | 3,687.1 | 108.2 | -767.2 | 774.8 | 0.00 | 0.00 | 0.00 |
| 3,840.0 | 17.59 | 278.03 | 3,725.2 | 109.9 | -779.2 | 786.9 | 0.00 | 0.00 | 0.00 |
| 3,880.0 | 17.59 | 278.03 | 3,763.3 | 111.6 | -791.2 | 799.0 | 0.00 | 0.00 | 0.00 |
| 3,920.0 | 17.59 | 278.03 | 3,801.5 | 113.3 | -803.1 | 811.1 | 0.00 | 0.00 | 0.00 |
| 3,960.0 | 17.59 | 278.03 | 3,839.6 | 115.0 | -815.1 | 823.2 | 0.00 | 0.00 | 0.00 |
| 4,000.0 | 17.59 | 278.03 | 3,877.7 | 116.7 | -827.1 | 835.3 | 0.00 | 0.00 | 0.00 |
| 4,040.0 | 17.59 | 278.03 | 3,915.9 | 118.4 | -839.0 | 847.3 | 0.00 | 0.00 | 0.00 |
| 4,080.0 | 17.59 | 278.03 | 3,954.0 | 120.1 | -851.0 | 859.4 | 0.00 | 0.00 | 0.00 |
| 4,120.0 | 17.59 | 278.03 | 3,992.1 | 121.8 | -863.0 | 871.5 | 0.00 | 0.00 | 0.00 |
| 4,160.0 | 17.59 | 278.03 | 4,030.3 | 123.4 | -874.9 | 883.6 | 0.00 | 0.00 | 0.00 |
| 4,200.0 | 17.59 | 278.03 | 4,068.4 | 125.1 | -886.9 | 895.7 | 0.00 | 0.00 | 0.00 |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Chesnut G22-29D |
| Company: | NOBLE ENERGY INC WELD COUNTY CO | TVD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Project: | SEC.22-T4N-R65W | MD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Site: | Chesnut G22-29D Pad Sec.22-T4N-R65W | North Reference: | True |
| Well: | Chesnut G22-29D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Noble Chesnut G22-29D Plan #3 (2-7-12) | | |

| 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) |
| 4,240.0 | 17.59 | 278.03 | 4,106.5 | 126.8 | -898.9 | 907.8 | 0.00 | 0.00 | 0.00 |
| 4,280.0 | 17.59 | 278.03 | 4,144.6 | 128.5 | -910.9 | 919.9 | 0.00 | 0.00 | 0.00 |
| 4,320.0 | 17.59 | 278.03 | 4,182.8 | 130.2 | -922.8 | 932.0 | 0.00 | 0.00 | 0.00 |
| 4,360.0 | 17.59 | 278.03 | 4,220.9 | 131.9 | -934.8 | 944.1 | 0.00 | 0.00 | 0.00 |
| 4,400.0 | 17.59 | 278.03 | 4,259.0 | 133.6 | -946.8 | 956.1 | 0.00 | 0.00 | 0.00 |
| 4,440.0 | 17.59 | 278.03 | 4,297.2 | 135.3 | -958.7 | 968.2 | 0.00 | 0.00 | 0.00 |
| 4,480.0 | 17.59 | 278.03 | 4,335.3 | 137.0 | -970.7 | 980.3 | 0.00 | 0.00 | 0.00 |
| 4,520.0 | 17.59 | 278.03 | 4,373.4 | 138.6 | -982.7 | 992.4 | 0.00 | 0.00 | 0.00 |
| 4,560.0 | 17.59 | 278.03 | 4,411.6 | 140.3 | -994.6 | 1,004.5 | 0.00 | 0.00 | 0.00 |
| 4,600.0 | 17.59 | 278.03 | 4,449.7 | 142.0 | -1,006.6 | 1,016.6 | 0.00 | 0.00 | 0.00 |
| 4,640.0 | 17.59 | 278.03 | 4,487.8 | 143.7 | -1,018.6 | 1,028.7 | 0.00 | 0.00 | 0.00 |
| 4,680.0 | 17.59 | 278.03 | 4,525.9 | 145.4 | -1,030.6 | 1,040.8 | 0.00 | 0.00 | 0.00 |
| 4,720.0 | 17.59 | 278.03 | 4,564.1 | 147.1 | -1,042.5 | 1,052.9 | 0.00 | 0.00 | 0.00 |
| 4,760.0 | 17.59 | 278.03 | 4,602.2 | 148.8 | -1,054.5 | 1,064.9 | 0.00 | 0.00 | 0.00 |
| 4,800.0 | 17.59 | 278.03 | 4,640.3 | 150.5 | -1,066.5 | 1,077.0 | 0.00 | 0.00 | 0.00 |
| 4,840.0 | 17.59 | 278.03 | 4,678.5 | 152.2 | -1,078.4 | 1,089.1 | 0.00 | 0.00 | 0.00 |
| 4,880.0 | 17.59 | 278.03 | 4,716.6 | 153.8 | -1,090.4 | 1,101.2 | 0.00 | 0.00 | 0.00 |
| 4,920.0 | 17.59 | 278.03 | 4,754.7 | 155.5 | -1,102.4 | 1,113.3 | 0.00 | 0.00 | 0.00 |
| 4,960.0 | 17.59 | 278.03 | 4,792.8 | 157.2 | -1,114.3 | 1,125.4 | 0.00 | 0.00 | 0.00 |
| 5,000.0 | 17.59 | 278.03 | 4,831.0 | 158.9 | -1,126.3 | 1,137.5 | 0.00 | 0.00 | 0.00 |
| 5,040.0 | 17.59 | 278.03 | 4,869.1 | 160.6 | -1,138.3 | 1,149.6 | 0.00 | 0.00 | 0.00 |
| 5,080.0 | 17.59 | 278.03 | 4,907.2 | 162.3 | -1,150.3 | 1,161.7 | 0.00 | 0.00 | 0.00 |
| 5,108.3 | 17.59 | 278.03 | 4,934.2 | 163.5 | -1,158.7 | 1,170.2 | 0.00 | 0.00 | 0.00 |
| 5,120.0 | 17.36 | 278.03 | 4,945.4 | 164.0 | -1,162.2 | 1,173.7 | 2.00 | -2.00 | 0.00 |
| 5,160.0 | 16.56 | 278.03 | 4,983.6 | 165.6 | -1,173.8 | 1,185.4 | 2.00 | -2.00 | 0.00 |
| 5,200.0 | 15.76 | 278.03 | 5,022.1 | 167.2 | -1,184.8 | 1,196.5 | 2.00 | -2.00 | 0.00 |
| 5,240.0 | 14.96 | 278.03 | 5,060.6 | 168.6 | -1,195.3 | 1,207.1 | 2.00 | -2.00 | 0.00 |
| 5,280.0 | 14.16 | 278.03 | 5,099.3 | 170.0 | -1,205.2 | 1,217.2 | 2.00 | -2.00 | 0.00 |
| 5,320.0 | 13.36 | 278.03 | 5,138.2 | 171.4 | -1,214.6 | 1,226.7 | 2.00 | -2.00 | 0.00 |
| 5,360.0 | 12.56 | 278.03 | 5,177.2 | 172.6 | -1,223.5 | 1,235.6 | 2.00 | -2.00 | 0.00 |
| 5,400.0 | 11.76 | 278.03 | 5,216.3 | 173.8 | -1,231.9 | 1,244.1 | 2.00 | -2.00 | 0.00 |
| 5,440.0 | 10.96 | 278.03 | 5,255.5 | 174.9 | -1,239.7 | 1,251.9 | 2.00 | -2.00 | 0.00 |
| 5,480.0 | 10.16 | 278.03 | 5,294.8 | 175.9 | -1,246.9 | 1,259.3 | 2.00 | -2.00 | 0.00 |
| 5,520.0 | 9.36 | 278.03 | 5,334.2 | 176.9 | -1,253.6 | 1,266.0 | 2.00 | -2.00 | 0.00 |
| 5,560.0 | 8.56 | 278.03 | 5,373.7 | 177.7 | -1,259.8 | 1,272.3 | 2.00 | -2.00 | 0.00 |
| 5,600.0 | 7.76 | 278.03 | 5,413.3 | 178.5 | -1,265.4 | 1,278.0 | 2.00 | -2.00 | 0.00 |
| 5,640.0 | 6.96 | 278.03 | 5,453.0 | 179.2 | -1,270.5 | 1,283.1 | 2.00 | -2.00 | 0.00 |
| 5,680.0 | 6.16 | 278.03 | 5,492.8 | 179.9 | -1,275.0 | 1,287.6 | 2.00 | -2.00 | 0.00 |
| 5,720.0 | 5.36 | 278.03 | 5,532.5 | 180.4 | -1,279.0 | 1,291.7 | 2.00 | -2.00 | 0.00 |
| 5,760.0 | 4.56 | 278.03 | 5,572.4 | 180.9 | -1,282.4 | 1,295.1 | 2.00 | -2.00 | 0.00 |
| 5,800.0 | 3.76 | 278.03 | 5,612.3 | 181.3 | -1,285.3 | 1,298.0 | 2.00 | -2.00 | 0.00 |
| 5,840.0 | 2.96 | 278.03 | 5,652.2 | 181.7 | -1,287.6 | 1,300.4 | 2.00 | -2.00 | 0.00 |
| 5,880.0 | 2.16 | 278.03 | 5,692.2 | 181.9 | -1,289.4 | 1,302.1 | 2.00 | -2.00 | 0.00 |
| 5,920.0 | 1.36 | 278.03 | 5,732.2 | 182.1 | -1,290.6 | 1,303.4 | 2.00 | -2.00 | 0.00 |
| 5,960.0 | 0.56 | 278.03 | 5,772.2 | 182.2 | -1,291.2 | 1,304.0 | 2.00 | -2.00 | 0.00 |
| 5,987.8 | 0.00 | 0.00 | 5,800.0 | 182.2 | -1,291.4 | 1,304.2 | 2.00 | -2.00 | 0.00 |
| TARGET BHL 225'FNL & 1150'FWL | | | | | | | | | |
| 6,000.0 | 0.00 | 0.00 | 5,812.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,040.0 | 0.00 | 0.00 | 5,852.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,080.0 | 0.00 | 0.00 | 5,892.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,120.0 | 0.00 | 0.00 | 5,932.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,160.0 | 0.00 | 0.00 | 5,972.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,200.0 | 0.00 | 0.00 | 6,012.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,240.0 | 0.00 | 0.00 | 6,052.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |

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|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Chesnut G22-29D |
| Company: | NOBLE ENERGY INC WELD COUNTY CO | TVD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Project: | SEC.22-T4N-R65W | MD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Site: | Chesnut G22-29D Pad Sec.22-T4N-R65W | North Reference: | True |
| Well: | Chesnut G22-29D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Noble Chesnut G22-29D Plan #3 (2-7-12) | | |

| 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) |
| 6,280.0 | 0.00 | 0.00 | 6,092.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,320.0 | 0.00 | 0.00 | 6,132.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,360.0 | 0.00 | 0.00 | 6,172.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,400.0 | 0.00 | 0.00 | 6,212.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,440.0 | 0.00 | 0.00 | 6,252.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,480.0 | 0.00 | 0.00 | 6,292.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,520.0 | 0.00 | 0.00 | 6,332.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,560.0 | 0.00 | 0.00 | 6,372.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,600.0 | 0.00 | 0.00 | 6,412.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,640.0 | 0.00 | 0.00 | 6,452.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,680.0 | 0.00 | 0.00 | 6,492.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,720.0 | 0.00 | 0.00 | 6,532.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,760.0 | 0.00 | 0.00 | 6,572.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,800.0 | 0.00 | 0.00 | 6,612.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,840.0 | 0.00 | 0.00 | 6,652.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,880.0 | 0.00 | 0.00 | 6,692.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,920.0 | 0.00 | 0.00 | 6,732.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,960.0 | 0.00 | 0.00 | 6,772.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 6,975.8 | 0.00 | 0.00 | 6,788.0 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| TARGET CIRCLE 225'FNL & 1150'FWL | | | | | | | | | |
| 6,976.8 | 0.00 | 0.00 | 6,789.0 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| NIOBRARA | | | | | | | | | |
| 7,000.0 | 0.00 | 0.00 | 6,812.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,040.0 | 0.00 | 0.00 | 6,852.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,080.0 | 0.00 | 0.00 | 6,892.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,120.0 | 0.00 | 0.00 | 6,932.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,160.0 | 0.00 | 0.00 | 6,972.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,200.0 | 0.00 | 0.00 | 7,012.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,240.0 | 0.00 | 0.00 | 7,052.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,280.0 | 0.00 | 0.00 | 7,092.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,296.8 | 0.00 | 0.00 | 7,109.0 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| CODELL | | | | | | | | | |
| 7,320.0 | 0.00 | 0.00 | 7,132.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,360.0 | 0.00 | 0.00 | 7,172.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,400.0 | 0.00 | 0.00 | 7,212.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,440.0 | 0.00 | 0.00 | 7,252.2 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| 7,445.8 | 0.00 | 0.00 | 7,258.0 | 182.2 | -1,291.4 | 1,304.2 | 0.00 | 0.00 | 0.00 |
| HARDLINE 225'N OF BHL | | | | | | | | | |

| | | | |
|------------------|--|-------------------------------------|--------------------------------------|
| Database: | Landmark | Local Co-ordinate Reference: | Well Chesnut G22-29D |
| Company: | NOBLE ENERGY INC WELD COUNTY CO | TVD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Project: | SEC.22-T4N-R65W | MD Reference: | WELL @ 4748.0ft (Original Well Elev) |
| Site: | Chesnut G22-29D Pad Sec.22-T4N-R65W | North Reference: | True |
| Well: | Chesnut G22-29D | Survey Calculation Method: | Minimum Curvature |
| Wellbore: | Wellbore #1 | | |
| Design: | Noble Chesnut G22-29D Plan #3 (2-7-12) | | |

| Targets | | | | | | | | | |
|--|---------------|--------------|----------|------------|------------|---------------|--------------|-----------|-------------|
| Target Name | Dip Angle (°) | Dip Dir. (°) | TVD (ft) | +N/-S (ft) | +E/-W (ft) | Northing (ft) | Easting (ft) | Latitude | Longitude |
| - hit/miss target | | | | | | | | | |
| - Shape | | | | | | | | | |
| TARGET BHL 225'FN | 0.00 | 0.00 | 5,800.0 | 182.2 | -1,291.4 | 1,354,912.73 | 3,235,800.11 | 40.304550 | -104.654530 |
| - plan hits target center | | | | | | | | | |
| - Point | | | | | | | | | |
| HARDLINE 225'N OF | 0.00 | 0.00 | 7,258.0 | 407.2 | -1,391.4 | 1,355,136.78 | 3,235,697.97 | 40.305168 | -104.654889 |
| - plan misses target center by 246.2ft at 7445.8ft MD (7258.0 TVD, 182.2 N, -1291.4 E) | | | | | | | | | |
| - Polygon | | | | | | | | | |
| Point 1 | | | 7,258.0 | 0.0 | 0.0 | 1,355,136.78 | 3,235,697.97 | | |
| Point 2 | | | 7,258.0 | 0.0 | 200.0 | 1,355,138.70 | 3,235,897.95 | | |
| TARGET CIRCLE 225' | 0.00 | 0.00 | 6,788.0 | 182.2 | -1,291.4 | 1,354,912.73 | 3,235,800.11 | 40.304550 | -104.654530 |
| - plan hits target center | | | | | | | | | |
| - Circle (radius 75.0) | | | | | | | | | |

| Casing Points | | | | | |
|---------------------|---------------------|--------|---------------------|-------------------|--|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Casing Diameter (") | Hole Diameter (") | |
| 600.0 | 600.0 | 8 5/8" | 8-5/8 | 12-1/4 | |

| Formations | | | | | |
|---------------------|---------------------|----------|-----------|---------|-------------------|
| Measured Depth (ft) | Vertical Depth (ft) | Name | Lithology | Dip (°) | Dip Direction (°) |
| 6,976.8 | 6,789.0 | NIOBRARA | | 0.00 | |
| 7,296.8 | 7,109.0 | CODELL | | 0.00 | |