

Well Name: **Houndskeeper PC H01-21D**

Surface Location: Houndskeeper PC H01-21D Pad Sec.1-T3N-R65W
North American Datum 1983 US State Plane 1983 Colorado Northern Zone

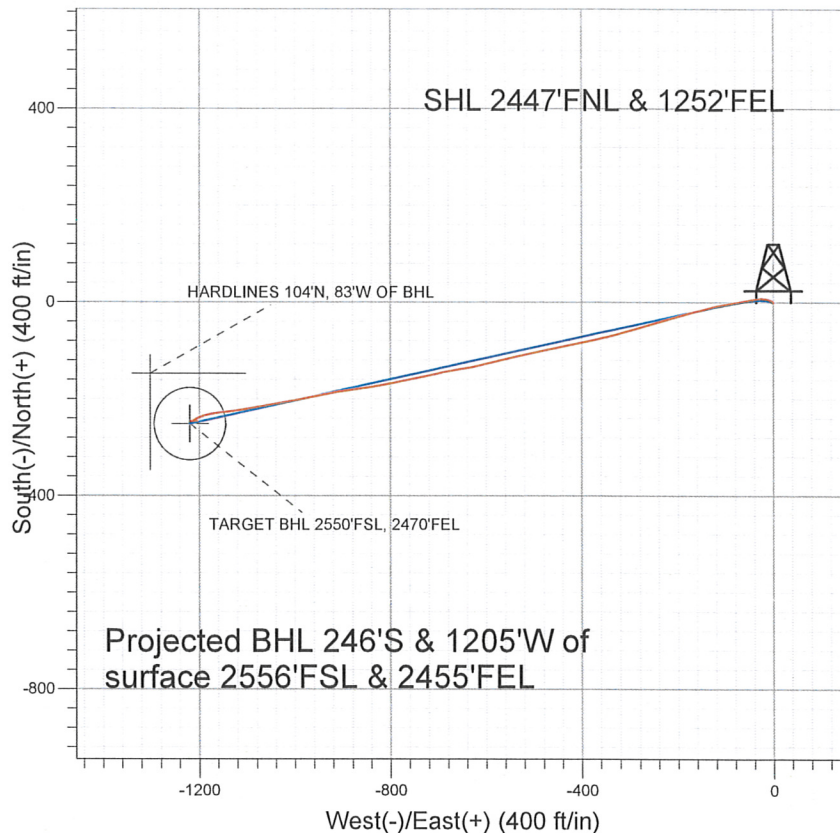
Ground Elevation: 4870.0

| +N/-S | +E/-W | Northing | Easting | Latitude | Longitude |
|-------|-------|------------|------------|------------------|-------------------|
| 0.0 | 0.0 | 1336909.43 | 3249249.49 | 40° 15' 17.172 N | 104° 36' 25.056 W |

Original Well Elev WELL @ 4883.0ft (Original Well Elev)

Slot

NOBLE ENERGY INC WELD COUNTY CO

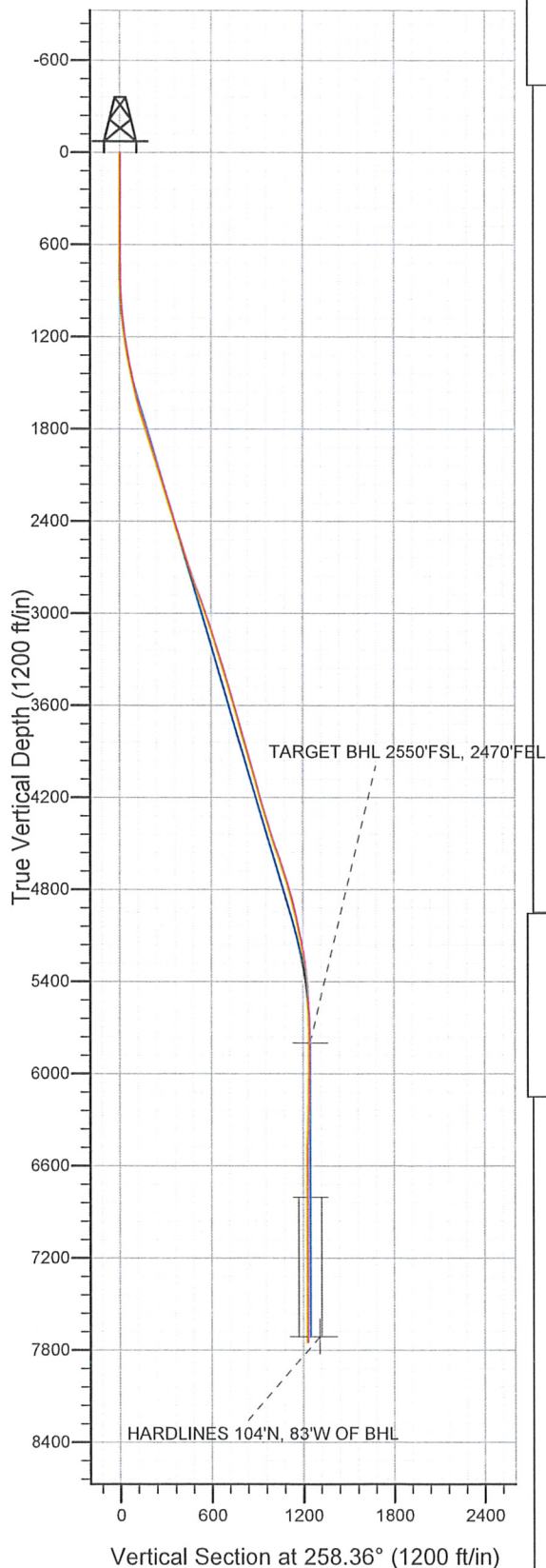


LEGEND

- △ Houndskeeper PC H01-21D, Wellbore #1, Noble Houndskeeper PC H01-21D Plan #2 (05-27-1)
- Wellbore #1
- Survey #1

Final Survey Plot

Projected Final Survey -
7921'MD & 7745'TVD @ 1229'VS
0.6 deg Inc 143.4 deg AZ



Project: SEC.1-T3N-R65W
Site: Houndskeeper PC H01-21D Pad Sec.1-T3N-R65W
Well: Houndskeeper PC H01-21D
Plan: Wellbore #1



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.1-T3N-R65W

Houndskeeper PC H01-21D Pad Sec.1-T3N-R65W

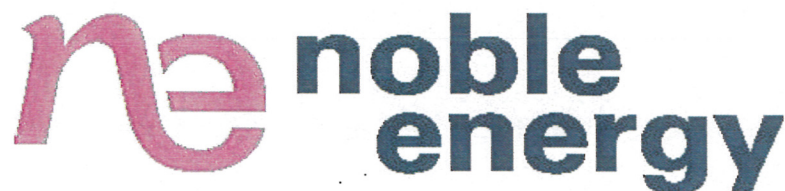
Houndskeeper PC H01-21D

Wellbore #1

Survey: Survey #1

Standard Survey Report

20 April, 2011



Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.1-T3N-R65W
Site: Houndskeeper PC H01-21D Pad
 Sec.1-T3N-R65W
Well: Houndskeeper PC H01-21D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Site Houndskeeper PC H01-21D Pad
 Sec.1-T3N-R65W
TVD Reference: WELL @ 4883.0ft (Original Well Elev)
MD Reference: WELL @ 4883.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

| | | | |
|--------------------|---------------------------|----------------------|-----------------------------|
| Project | SEC.1-T3N-R65W | | |
| 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 Houndskeeper PC H01-21D Pad Sec.1-T3N-R65W

| | | | | |
|-------------------------------------|---------------------|-----------------|--------------------------|-------------------|
| Site Position: | Northing: | 1,336,909.44 ft | Latitude: | 40° 15' 17.172 N |
| From: Lat/Long | Easting: | 3,249,249.49 ft | Longitude: | 104° 36' 25.056 W |
| Position Uncertainty: 0.0 ft | Slot Radius: | " | Grid Convergence: | 0.58 ° |

Well Houndskeeper PC H01-21D

| | | | | | | |
|-----------------------------|--------------|----------------------------|------------------|----------------------|-------------------|-------------------|
| Well Position | +N/-S | 0.0 ft | Northing: | 1,336,909.43 ft | Latitude: | 40° 15' 17.172 N |
| | +E/-W | 0.0 ft | Easting: | 3,249,249.49 ft | Longitude: | 104° 36' 25.056 W |
| Position Uncertainty | 0.0 ft | Wellhead Elevation: | ft | Ground Level: | 4,870.0 ft | |

Wellbore Wellbore #1

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| | IGRF2010 | 5/18/2010 | 8.91 | 67.00 | 53,186 |

Design Wellbore #1

Audit Notes:

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

| Vertical Section: | Depth From (TVD) (ft) | +N/-S (ft) | +E/-W (ft) | Direction (°) |
|-------------------|--------------------------|---------------|---------------|------------------|
| | 0.0 | 0.0 | 0.0 | 258.36 |

Survey Program Date 4/20/2011

| From (ft) | To (ft) | Survey (Wellbore) | Tool Name | Description |
|-----------|---------|-------------------------|-----------|----------------|
| 726.0 | 7,921.0 | Survey #1 (Wellbore #1) | MWD | MWD - Standard |

Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 0.0 | 0.00 | 0.00 | 0.0 | 0.0 | 0.0 | 0.0 | 0.00 | 0.00 | 0.00 |
| 726.0 | 0.30 | 335.50 | 726.0 | 1.7 | -0.8 | 0.4 | 0.04 | 0.04 | 0.00 |
| 811.0 | 1.50 | 299.30 | 811.0 | 2.5 | -1.9 | 1.3 | 1.49 | 1.41 | -42.59 |
| 897.0 | 2.90 | 300.50 | 896.9 | 4.1 | -4.7 | 3.8 | 1.63 | 1.63 | 1.40 |
| 982.0 | 4.60 | 288.30 | 981.7 | 6.3 | -9.8 | 8.3 | 2.20 | 2.00 | -14.35 |
| 1,068.0 | 6.40 | 276.20 | 1,067.3 | 7.9 | -17.8 | 15.9 | 2.48 | 2.09 | -14.07 |
| 1,154.0 | 7.80 | 265.70 | 1,152.7 | 8.0 | -28.4 | 26.2 | 2.21 | 1.63 | -12.21 |
| 1,239.0 | 8.80 | 258.30 | 1,236.8 | 6.2 | -40.5 | 38.5 | 1.72 | 1.18 | -8.71 |
| 1,325.0 | 10.00 | 258.70 | 1,321.6 | 3.4 | -54.3 | 52.5 | 1.40 | 1.40 | 0.47 |
| 1,411.0 | 10.90 | 261.70 | 1,406.2 | 0.8 | -69.7 | 68.1 | 1.22 | 1.05 | 3.49 |
| 1,496.0 | 12.40 | 260.00 | 1,489.5 | -2.0 | -86.6 | 85.2 | 1.81 | 1.76 | -2.00 |

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.1-T3N-R65W
Site: Houndskeeper PC H01-21D Pad
Sec.1-T3N-R65W
Well: Houndskeeper PC H01-21D
Wellbore: Wellbore #1
Design: Wellbore #1

Local Co-ordinate Reference: Site Houndskeeper PC H01-21D Pad
Sec.1-T3N-R65W
TVD Reference: WELL @ 4883.0ft (Original Well Elev)
MD Reference: WELL @ 4883.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---------------------|-----------------|-------------|---------------------|------------|------------|-----------------------|-----------------------|----------------------|---------------------|
| 1,582.0 | 14.30 | 260.60 | 1,573.1 | -5.3 | -106.2 | 105.1 | 2.22 | 2.21 | 0.70 |
| 1,667.0 | 15.80 | 256.40 | 1,655.2 | -9.7 | -127.8 | 127.1 | 2.18 | 1.76 | -4.94 |
| 1,753.0 | 16.40 | 254.80 | 1,737.8 | -15.7 | -150.9 | 150.9 | 0.87 | 0.70 | -1.86 |
| 1,838.0 | 17.80 | 256.00 | 1,819.1 | -22.0 | -175.1 | 175.9 | 1.70 | 1.65 | 1.41 |
| 1,924.0 | 18.00 | 252.40 | 1,900.9 | -29.2 | -200.5 | 202.3 | 1.31 | 0.23 | -4.19 |
| 2,010.0 | 17.80 | 254.70 | 1,982.8 | -36.6 | -225.8 | 228.6 | 0.85 | -0.23 | 2.67 |
| 2,095.0 | 17.30 | 254.10 | 2,063.8 | -43.5 | -250.5 | 254.2 | 0.63 | -0.59 | -0.71 |
| 2,181.0 | 17.00 | 251.80 | 2,146.0 | -51.0 | -274.8 | 279.4 | 0.86 | -0.35 | -2.67 |
| 2,266.0 | 16.60 | 254.00 | 2,227.4 | -58.2 | -298.2 | 303.9 | 0.88 | -0.47 | 2.59 |
| 2,352.0 | 17.10 | 255.00 | 2,309.7 | -64.9 | -322.3 | 328.7 | 0.67 | 0.58 | 1.16 |
| 2,438.0 | 17.50 | 256.30 | 2,391.8 | -71.2 | -347.0 | 354.3 | 0.65 | 0.47 | 1.51 |
| 2,523.0 | 18.00 | 257.30 | 2,472.7 | -77.1 | -372.3 | 380.2 | 0.69 | 0.59 | 1.18 |
| 2,608.0 | 18.20 | 258.80 | 2,553.5 | -82.6 | -398.1 | 406.6 | 0.60 | 0.24 | 1.76 |
| 2,694.0 | 18.20 | 257.00 | 2,635.2 | -88.2 | -424.4 | 433.4 | 0.65 | 0.00 | -2.09 |
| 2,780.0 | 18.90 | 259.10 | 2,716.7 | -93.9 | -451.1 | 460.8 | 1.13 | 0.81 | 2.44 |
| 2,865.0 | 19.90 | 258.30 | 2,796.9 | -99.4 | -478.8 | 489.0 | 1.22 | 1.18 | -0.94 |
| 2,951.0 | 19.70 | 258.00 | 2,877.8 | -105.4 | -507.3 | 518.2 | 0.26 | -0.23 | -0.35 |
| 3,036.0 | 19.80 | 256.80 | 2,957.8 | -111.6 | -535.4 | 546.9 | 0.49 | 0.12 | -1.41 |
| 3,122.0 | 19.20 | 256.60 | 3,038.9 | -118.2 | -563.3 | 575.6 | 0.70 | -0.70 | -0.23 |
| 3,207.0 | 18.10 | 255.90 | 3,119.4 | -124.7 | -589.7 | 602.7 | 1.32 | -1.29 | -0.82 |
| 3,293.0 | 18.20 | 257.70 | 3,201.2 | -130.8 | -615.8 | 629.5 | 0.66 | 0.12 | 2.09 |
| 3,379.0 | 16.80 | 260.20 | 3,283.2 | -135.8 | -641.1 | 655.4 | 1.85 | -1.63 | 2.91 |
| 3,464.0 | 16.50 | 259.20 | 3,364.6 | -140.1 | -665.1 | 679.7 | 0.49 | -0.35 | -1.18 |
| 3,550.0 | 17.10 | 258.60 | 3,446.9 | -144.9 | -689.5 | 704.6 | 0.73 | 0.70 | -0.70 |
| 3,636.0 | 16.50 | 258.90 | 3,529.3 | -149.8 | -713.9 | 729.4 | 0.70 | -0.70 | 0.35 |
| 3,722.0 | 16.90 | 257.90 | 3,611.6 | -154.8 | -738.1 | 754.1 | 0.57 | 0.47 | -1.16 |
| 3,807.0 | 16.30 | 257.60 | 3,693.1 | -159.9 | -761.8 | 778.4 | 0.71 | -0.71 | -0.35 |
| 3,893.0 | 15.40 | 258.70 | 3,775.8 | -164.7 | -784.8 | 801.9 | 1.10 | -1.05 | 1.28 |
| 3,979.0 | 16.00 | 258.80 | 3,858.6 | -169.3 | -807.6 | 825.2 | 0.70 | 0.70 | 0.12 |
| 4,064.0 | 16.50 | 261.20 | 3,940.2 | -173.4 | -831.0 | 848.9 | 0.98 | 0.59 | 2.82 |
| 4,150.0 | 16.40 | 262.20 | 4,022.7 | -176.9 | -855.1 | 873.2 | 0.35 | -0.12 | 1.16 |
| 4,236.0 | 15.70 | 261.30 | 4,105.4 | -180.3 | -878.7 | 897.0 | 0.86 | -0.81 | -1.05 |
| 4,321.0 | 14.50 | 261.90 | 4,187.4 | -183.6 | -900.6 | 919.1 | 1.42 | -1.41 | 0.71 |
| 4,406.0 | 16.60 | 260.70 | 4,269.3 | -187.0 | -923.1 | 941.8 | 2.50 | 2.47 | -1.41 |
| 4,492.0 | 17.10 | 256.90 | 4,351.6 | -191.9 | -947.5 | 966.8 | 1.41 | 0.58 | -4.42 |
| 4,578.0 | 18.50 | 258.60 | 4,433.5 | -197.4 | -973.2 | 993.0 | 1.74 | 1.63 | 1.98 |
| 4,663.0 | 18.90 | 261.00 | 4,514.0 | -202.3 | -1,000.0 | 1,020.3 | 1.02 | 0.47 | 2.82 |
| 4,749.0 | 19.10 | 259.30 | 4,595.3 | -207.0 | -1,027.6 | 1,048.3 | 0.68 | 0.23 | -1.98 |
| 4,834.0 | 17.90 | 259.10 | 4,675.9 | -212.1 | -1,054.1 | 1,075.2 | 1.41 | -1.41 | -0.24 |
| 4,920.0 | 16.90 | 260.10 | 4,758.0 | -216.7 | -1,079.4 | 1,100.9 | 1.21 | -1.16 | 1.16 |
| 5,006.0 | 15.10 | 261.00 | 4,840.7 | -220.6 | -1,102.8 | 1,124.6 | 2.11 | -2.09 | 1.05 |
| 5,091.0 | 13.40 | 263.70 | 4,923.0 | -223.5 | -1,123.5 | 1,145.5 | 2.15 | -2.00 | 3.18 |
| 5,177.0 | 12.50 | 261.70 | 5,006.9 | -225.9 | -1,142.6 | 1,164.7 | 1.17 | -1.05 | -2.33 |
| 5,262.0 | 11.10 | 261.90 | 5,090.1 | -228.4 | -1,159.8 | 1,182.1 | 1.65 | -1.65 | 0.24 |
| 5,348.0 | 9.80 | 260.00 | 5,174.6 | -230.8 | -1,175.2 | 1,197.6 | 1.56 | -1.51 | -2.21 |
| 5,433.0 | 7.80 | 255.50 | 5,258.6 | -233.5 | -1,188.0 | 1,210.6 | 2.49 | -2.35 | -5.29 |
| 5,519.0 | 6.60 | 250.90 | 5,343.9 | -236.6 | -1,198.3 | 1,221.4 | 1.55 | -1.40 | -5.35 |
| 5,604.0 | 4.70 | 240.30 | 5,428.5 | -239.9 | -1,205.9 | 1,229.5 | 2.54 | -2.24 | -12.47 |
| 5,690.0 | 3.30 | 238.00 | 5,514.3 | -243.0 | -1,211.1 | 1,235.2 | 1.64 | -1.63 | -2.67 |
| 5,775.0 | 1.80 | 231.70 | 5,599.2 | -245.1 | -1,214.2 | 1,238.7 | 1.79 | -1.76 | -7.41 |
| 5,861.0 | 1.10 | 244.60 | 5,685.2 | -246.3 | -1,216.0 | 1,240.7 | 0.89 | -0.81 | 15.00 |
| 5,947.0 | 1.10 | 283.40 | 5,771.2 | -246.5 | -1,217.6 | 1,242.2 | 0.85 | 0.00 | 45.12 |
| 5,975.8 | 0.78 | 287.06 | 5,800.0 | -246.3 | -1,218.0 | 1,242.7 | 1.15 | -1.13 | 12.71 |

Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.1-T3N-R65W
Site: Houndskeeper PC H01-21D Pad
 Sec.1-T3N-R65W
Well: Houndskeeper PC H01-21D
Wellbore: Wellbore #1
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Local Co-ordinate Reference: Site Houndskeeper PC H01-21D Pad
 Sec.1-T3N-R65W
TVD Reference: WELL @ 4883.0ft (Original Well Elev)
MD Reference: WELL @ 4883.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: Landmark

Survey

| Measured Depth (ft) | Inclination (°) | Azimuth (°) | Vertical Depth (ft) | +N/-S (ft) | +E/-W (ft) | Vertical Section (ft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|---|--------------------|----------------|---------------------------|---------------|---------------|-----------------------------|-----------------------------|----------------------------|---------------------------|
| TARGET BHL 2550'FSL, 2470'FEL | | | | | | | | | |
| 6,032.0 | 0.20 | 330.30 | 5,856.2 | -246.1 | -1,218.4 | 1,243.0 | 1.15 | -1.02 | 76.95 |
| 6,204.0 | 0.70 | 90.40 | 6,028.2 | -245.9 | -1,217.5 | 1,242.1 | 0.48 | 0.29 | 69.83 |
| 6,375.0 | 1.30 | 81.30 | 6,199.2 | -245.6 | -1,214.6 | 1,239.1 | 0.36 | 0.35 | -5.32 |
| 6,547.0 | 2.10 | 92.40 | 6,371.1 | -245.4 | -1,209.5 | 1,234.1 | 0.50 | 0.47 | 6.45 |
| 6,718.0 | 0.80 | 104.70 | 6,542.0 | -245.9 | -1,205.2 | 1,230.0 | 0.78 | -0.76 | 7.19 |
| 6,890.0 | 0.10 | 41.20 | 6,714.0 | -246.1 | -1,203.9 | 1,228.8 | 0.44 | -0.41 | -36.92 |
| 6,979.0 | 0.10 | 41.20 | 6,803.0 | -245.9 | -1,203.8 | 1,228.7 | 0.00 | 0.00 | 0.00 |
| TARGET CIRCLE 2550'FSL, 2470'FEL | | | | | | | | | |
| 7,061.0 | 0.10 | 41.20 | 6,885.0 | -245.8 | -1,203.7 | 1,228.6 | 0.00 | 0.00 | 0.00 |
| 7,233.0 | 0.20 | 286.10 | 7,057.0 | -245.6 | -1,203.9 | 1,228.7 | 0.15 | 0.06 | -66.92 |
| 7,404.0 | 0.20 | 286.10 | 7,228.0 | -245.5 | -1,204.5 | 1,229.3 | 0.00 | 0.00 | 0.00 |
| 7,576.0 | 0.50 | 314.60 | 7,400.0 | -244.9 | -1,205.3 | 1,229.9 | 0.20 | 0.17 | 16.57 |
| 7,746.0 | 0.30 | 129.40 | 7,570.0 | -244.6 | -1,205.5 | 1,230.1 | 0.47 | -0.12 | 102.82 |
| 7,873.0 | 0.60 | 143.40 | 7,697.0 | -245.4 | -1,204.9 | 1,229.6 | 0.25 | 0.24 | 11.02 |
| HARDLINES 104'N, 83'W OF BHL | | | | | | | | | |
| 7,921.0 | 0.60 | 143.40 | 7,745.0 | -245.8 | -1,204.6 | 1,229.4 | 0.00 | 0.00 | 0.00 |

Checked By: _____ Approved By: _____ Date: _____