

# **NORTHERN DELAWARE BASIN**

**LEA COUNTY, NM**

**BULLDOG**

**HARRIER FED COM #305H**

**OWB**

**Design: AWP**

## **Standard Survey Report**

**14 November, 2019**

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

|                    |                                      |                      |                |
|--------------------|--------------------------------------|----------------------|----------------|
| <b>Project</b>     | LEA COUNTY, NM                       |                      |                |
| <b>Map System:</b> | US State Plane 1927 (Exact solution) | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | NAD 1927 (NADCON CONUS)              |                      |                |
| <b>Map Zone:</b>   | New Mexico East 3001                 |                      |                |

|                              |          |                          |                  |
|------------------------------|----------|--------------------------|------------------|
| <b>Site</b>                  | BULLDOG  |                          |                  |
| <b>Site Position:</b>        |          | <b>Northing:</b>         | 398,637.10 usft  |
| <b>From:</b>                 | Map      | <b>Easting:</b>          | 741,887.40 usft  |
| <b>Position Uncertainty:</b> | 0.0 usft | <b>Slot Radius:</b>      | 13-3/16 "        |
|                              |          | <b>Latitude:</b>         | 32° 5' 36.820 N  |
|                              |          | <b>Longitude:</b>        | 103° 33' 8.116 W |
|                              |          | <b>Grid Convergence:</b> | 0.42 °           |

|                             |                       |          |                                    |
|-----------------------------|-----------------------|----------|------------------------------------|
| <b>Well</b>                 | HARRIER FED COM #305H |          |                                    |
| <b>Well Position</b>        | <b>+N/-S</b>          | 0.0 usft | <b>Northing:</b> 388,326.00 usft   |
|                             | <b>+E/-W</b>          | 0.0 usft | <b>Easting:</b> 711,231.40 usft    |
| <b>Position Uncertainty</b> |                       | 3.0 usft | <b>Wellhead Elevation:</b> usft    |
|                             |                       |          | <b>Latitude:</b> 32° 3' 56.841 N   |
|                             |                       |          | <b>Longitude:</b> 103° 39' 5.219 W |
|                             |                       |          | <b>Ground Level:</b> 3,247.6 usft  |

|           |            |             |                 |               |                     |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| Wellbore  | OWB        |             |                 |               |                     |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|           | WMM2015    | 10/18/2018  | 6.86            | 59.87         | 47,684.23566865     |

|                   |                            |                 |                 |                  |     |
|-------------------|----------------------------|-----------------|-----------------|------------------|-----|
| Design            | AWP                        |                 |                 |                  |     |
| Audit Notes:      |                            |                 |                 |                  |     |
| Version:          | 1.0                        | Phase:          | ACTUAL          | Tie On Depth:    | 0.0 |
| Vertical Section: | Depth From (TVD)<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Direction<br>(°) |     |
|                   | 0.0                        | 0.0             | 0.0             | 358.65           |     |

|                       |                  |                          |                     |                                    |
|-----------------------|------------------|--------------------------|---------------------|------------------------------------|
| <b>Survey Program</b> | <b>Date</b>      | 9/24/2019                |                     |                                    |
| <b>From (usft)</b>    | <b>To (usft)</b> | <b>Survey (Wellbore)</b> | <b>Tool Name</b>    | <b>Description</b>                 |
| 100.0                 | 8,480.0          | GYRO INT (OWB)           | Standard Keeper 104 | Standard Wireline Keeper ver 1.0.4 |
| 8,955.0               | 19,872.0         | MWD-CRV/LAT (OWB)        | MWD+IFR1+FDIR       | OWSG MWD + IFR1 + FDIR Correction  |

|                              |                        |                    |                              |                     |                     |                                |                                |                               |                              |
|------------------------------|------------------------|--------------------|------------------------------|---------------------|---------------------|--------------------------------|--------------------------------|-------------------------------|------------------------------|
| <b>Survey</b>                |                        |                    |                              |                     |                     |                                |                                |                               |                              |
| <b>Measured Depth (usft)</b> | <b>Inclination (°)</b> | <b>Azimuth (°)</b> | <b>Vertical Depth (usft)</b> | <b>+N/-S (usft)</b> | <b>+E/-W (usft)</b> | <b>Vertical Section (usft)</b> | <b>Dogleg Rate (°/100usft)</b> | <b>Build Rate (°/100usft)</b> | <b>Turn Rate (°/100usft)</b> |
| 0.0                          | 0.00                   | 0.00               | 0.0                          | 0.0                 | 0.0                 | 0.0                            | 0.00                           | 0.00                          | 0.00                         |
| 100.0                        | 0.45                   | 89.64              | 100.0                        | 0.0                 | 0.4                 | 0.0                            | 0.45                           | 0.45                          | 0.00                         |
| 125.0                        | 0.68                   | 79.44              | 125.0                        | 0.0                 | 0.6                 | 0.0                            | 1.00                           | 0.92                          | -40.80                       |
| 150.0                        | 0.66                   | 82.47              | 150.0                        | 0.1                 | 0.9                 | 0.1                            | 0.16                           | -0.08                         | 12.12                        |
| 175.0                        | 0.69                   | 86.36              | 175.0                        | 0.1                 | 1.2                 | 0.1                            | 0.22                           | 0.12                          | 15.56                        |
| 200.0                        | 1.07                   | 91.22              | 200.0                        | 0.1                 | 1.6                 | 0.1                            | 1.55                           | 1.52                          | 19.44                        |
| 225.0                        | 1.22                   | 93.35              | 225.0                        | 0.1                 | 2.1                 | 0.0                            | 0.62                           | 0.60                          | 8.52                         |
| 250.0                        | 1.20                   | 93.88              | 250.0                        | 0.1                 | 2.6                 | 0.0                            | 0.09                           | -0.08                         | 2.12                         |
| 275.0                        | 1.38                   | 90.96              | 275.0                        | 0.0                 | 3.2                 | 0.0                            | 0.77                           | 0.72                          | -11.68                       |
| 300.0                        | 1.36                   | 90.28              | 300.0                        | 0.0                 | 3.8                 | -0.1                           | 0.10                           | -0.08                         | -2.72                        |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
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| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 325.0                 | 1.37            | 90.34       | 325.0                 | 0.0          | 4.4          | -0.1                    | 0.04                    | 0.04                   | 0.24                  |
| 350.0                 | 1.29            | 93.48       | 350.0                 | 0.0          | 5.0          | -0.1                    | 0.43                    | -0.32                  | 12.56                 |
| 375.0                 | 1.27            | 91.71       | 374.9                 | 0.0          | 5.5          | -0.2                    | 0.18                    | -0.08                  | -7.08                 |
| 400.0                 | 1.21            | 92.51       | 399.9                 | 0.0          | 6.1          | -0.2                    | 0.25                    | -0.24                  | 3.20                  |
| 425.0                 | 1.19            | 88.67       | 424.9                 | 0.0          | 6.6          | -0.2                    | 0.33                    | -0.08                  | -15.36                |
| 450.0                 | 1.14            | 90.12       | 449.9                 | 0.0          | 7.1          | -0.2                    | 0.23                    | -0.20                  | 5.80                  |
| 475.0                 | 1.17            | 88.94       | 474.9                 | 0.0          | 7.6          | -0.2                    | 0.15                    | 0.12                   | -4.72                 |
| 500.0                 | 1.27            | 85.83       | 499.9                 | 0.0          | 8.1          | -0.2                    | 0.48                    | 0.40                   | -12.44                |
| 525.0                 | 1.19            | 89.83       | 524.9                 | 0.0          | 8.7          | -0.2                    | 0.47                    | -0.32                  | 16.00                 |
| 550.0                 | 1.22            | 86.56       | 549.9                 | 0.0          | 9.2          | -0.2                    | 0.30                    | 0.12                   | -13.08                |
| 575.0                 | 1.12            | 85.40       | 574.9                 | 0.1          | 9.7          | -0.2                    | 0.41                    | -0.40                  | -4.64                 |
| 600.0                 | 1.12            | 85.46       | 599.9                 | 0.1          | 10.2         | -0.1                    | 0.00                    | 0.00                   | 0.24                  |
| 625.0                 | 1.09            | 84.24       | 624.9                 | 0.1          | 10.7         | -0.1                    | 0.15                    | -0.12                  | -4.88                 |
| 650.0                 | 1.08            | 85.54       | 649.9                 | 0.2          | 11.1         | -0.1                    | 0.11                    | -0.04                  | 5.20                  |
| 675.0                 | 1.06            | 84.87       | 674.9                 | 0.2          | 11.6         | 0.0                     | 0.09                    | -0.08                  | -2.68                 |
| 700.0                 | 1.08            | 83.06       | 699.9                 | 0.3          | 12.1         | 0.0                     | 0.16                    | 0.08                   | -7.24                 |
| 725.0                 | 1.08            | 81.41       | 724.9                 | 0.3          | 12.5         | 0.0                     | 0.12                    | 0.00                   | -6.60                 |
| 750.0                 | 1.13            | 80.93       | 749.9                 | 0.4          | 13.0         | 0.1                     | 0.20                    | 0.20                   | -1.92                 |
| 775.0                 | 1.18            | 78.63       | 774.9                 | 0.5          | 13.5         | 0.2                     | 0.27                    | 0.20                   | -9.20                 |
| 800.0                 | 1.02            | 65.63       | 799.9                 | 0.6          | 14.0         | 0.3                     | 1.18                    | -0.64                  | -52.00                |
| 825.0                 | 1.19            | 65.71       | 824.9                 | 0.8          | 14.4         | 0.5                     | 0.68                    | 0.68                   | 0.32                  |
| 850.0                 | 1.21            | 62.30       | 849.9                 | 1.1          | 14.9         | 0.7                     | 0.30                    | 0.08                   | -13.64                |
| 875.0                 | 1.44            | 53.58       | 874.8                 | 1.4          | 15.4         | 1.0                     | 1.22                    | 0.92                   | -34.88                |
| 900.0                 | 1.87            | 47.76       | 899.8                 | 1.8          | 15.9         | 1.5                     | 1.84                    | 1.72                   | -23.28                |
| 925.0                 | 2.51            | 43.57       | 924.8                 | 2.5          | 16.6         | 2.1                     | 2.64                    | 2.56                   | -16.76                |
| 950.0                 | 2.50            | 43.78       | 949.8                 | 3.3          | 17.3         | 2.9                     | 0.05                    | -0.04                  | 0.84                  |
| 975.0                 | 2.72            | 42.90       | 974.8                 | 4.1          | 18.1         | 3.7                     | 0.89                    | 0.88                   | -3.52                 |
| 1,000.0               | 2.60            | 45.53       | 999.7                 | 5.0          | 18.9         | 4.5                     | 0.68                    | -0.48                  | 10.52                 |
| 1,025.0               | 2.56            | 45.13       | 1,024.7               | 5.8          | 19.7         | 5.3                     | 0.18                    | -0.16                  | -1.60                 |
| 1,050.0               | 2.64            | 45.72       | 1,049.7               | 6.5          | 20.5         | 6.1                     | 0.34                    | 0.32                   | 2.36                  |
| 1,075.0               | 2.30            | 46.55       | 1,074.7               | 7.3          | 21.3         | 6.8                     | 1.37                    | -1.36                  | 3.32                  |
| 1,100.0               | 1.72            | 39.65       | 1,099.6               | 7.9          | 21.9         | 7.4                     | 2.51                    | -2.32                  | -27.60                |
| 1,125.0               | 1.19            | 33.42       | 1,124.6               | 8.4          | 22.3         | 7.9                     | 2.21                    | -2.12                  | -24.92                |
| 1,150.0               | 1.11            | 31.20       | 1,149.6               | 8.9          | 22.6         | 8.3                     | 0.37                    | -0.32                  | -8.88                 |
| 1,175.0               | 1.10            | 25.22       | 1,174.6               | 9.3          | 22.8         | 8.7                     | 0.46                    | -0.04                  | -23.92                |
| 1,200.0               | 0.83            | 26.31       | 1,199.6               | 9.7          | 23.0         | 9.1                     | 1.08                    | -1.08                  | 4.36                  |
| 1,225.0               | 0.47            | 352.94      | 1,224.6               | 9.9          | 23.1         | 9.4                     | 2.03                    | -1.44                  | -133.48               |
| 1,250.0               | 0.57            | 285.24      | 1,249.6               | 10.1         | 22.9         | 9.5                     | 2.34                    | 0.40                   | -270.80               |
| 1,275.0               | 0.97            | 257.57      | 1,274.6               | 10.0         | 22.6         | 9.5                     | 2.14                    | 1.60                   | -110.68               |
| 1,300.0               | 1.34            | 253.44      | 1,299.6               | 9.9          | 22.1         | 9.4                     | 1.52                    | 1.48                   | -16.52                |
| 1,325.0               | 1.91            | 242.65      | 1,324.6               | 9.6          | 21.5         | 9.1                     | 2.58                    | 2.28                   | -43.16                |
| 1,350.0               | 2.87            | 236.90      | 1,349.6               | 9.1          | 20.6         | 8.6                     | 3.95                    | 3.84                   | -23.00                |
| 1,375.0               | 3.34            | 233.71      | 1,374.5               | 8.3          | 19.4         | 7.9                     | 2.00                    | 1.88                   | -12.76                |

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|------------------|-------------------------|-------------------------------------|-------------------------------------|
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| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 1,400.0               | 3.77            | 229.62      | 1,399.5               | 7.4          | 18.2         | 6.9                     | 2.00                    | 1.72                   | -16.36                |
| 1,425.0               | 4.29            | 227.40      | 1,424.4               | 6.2          | 16.9         | 5.8                     | 2.17                    | 2.08                   | -8.88                 |
| 1,450.0               | 5.23            | 224.18      | 1,449.4               | 4.8          | 15.4         | 4.4                     | 3.91                    | 3.76                   | -12.88                |
| 1,475.0               | 5.57            | 221.61      | 1,474.2               | 3.0          | 13.8         | 2.7                     | 1.67                    | 1.36                   | -10.28                |
| 1,500.0               | 5.64            | 221.90      | 1,499.1               | 1.2          | 12.2         | 0.9                     | 0.30                    | 0.28                   | 1.16                  |
| 1,525.0               | 5.72            | 221.67      | 1,524.0               | -0.6         | 10.6         | -0.9                    | 0.33                    | 0.32                   | -0.92                 |
| 1,550.0               | 5.65            | 222.27      | 1,548.9               | -2.5         | 8.9          | -2.7                    | 0.37                    | -0.28                  | 2.40                  |
| 1,575.0               | 5.65            | 222.86      | 1,573.8               | -4.3         | 7.2          | -4.5                    | 0.23                    | 0.00                   | 2.36                  |
| 1,600.0               | 5.76            | 221.38      | 1,598.6               | -6.1         | 5.6          | -6.3                    | 0.73                    | 0.44                   | -5.92                 |
| 1,625.0               | 5.58            | 221.46      | 1,623.5               | -8.0         | 3.9          | -8.1                    | 0.72                    | -0.72                  | 0.32                  |
| 1,650.0               | 5.59            | 221.88      | 1,648.4               | -9.8         | 2.3          | -9.8                    | 0.17                    | 0.04                   | 1.68                  |
| 1,675.0               | 5.64            | 222.21      | 1,673.3               | -11.6        | 0.7          | -11.6                   | 0.24                    | 0.20                   | 1.32                  |
| 1,700.0               | 5.67            | 221.51      | 1,698.1               | -13.4        | -1.0         | -13.4                   | 0.30                    | 0.12                   | -2.80                 |
| 1,725.0               | 5.68            | 222.34      | 1,723.0               | -15.3        | -2.6         | -15.2                   | 0.33                    | 0.04                   | 3.32                  |
| 1,750.0               | 5.64            | 222.43      | 1,747.9               | -17.1        | -4.3         | -17.0                   | 0.16                    | -0.16                  | 0.36                  |
| 1,775.0               | 5.45            | 221.42      | 1,772.8               | -18.9        | -5.9         | -18.8                   | 0.85                    | -0.76                  | -4.04                 |
| 1,800.0               | 5.64            | 221.88      | 1,797.7               | -20.7        | -7.5         | -20.5                   | 0.78                    | 0.76                   | 1.84                  |
| 1,825.0               | 5.48            | 221.04      | 1,822.6               | -22.5        | -9.1         | -22.3                   | 0.72                    | -0.64                  | -3.36                 |
| 1,850.0               | 5.53            | 220.37      | 1,847.4               | -24.3        | -10.7        | -24.1                   | 0.33                    | 0.20                   | -2.68                 |
| 1,875.0               | 5.43            | 219.93      | 1,872.3               | -26.2        | -12.2        | -25.9                   | 0.43                    | -0.40                  | -1.76                 |
| 1,900.0               | 4.78            | 219.12      | 1,897.2               | -27.9        | -13.6        | -27.6                   | 2.62                    | -2.60                  | -3.24                 |
| 1,925.0               | 4.38            | 216.68      | 1,922.1               | -29.5        | -14.8        | -29.1                   | 1.78                    | -1.60                  | -9.76                 |
| 1,950.0               | 4.27            | 215.95      | 1,947.1               | -31.0        | -16.0        | -30.6                   | 0.49                    | -0.44                  | -2.92                 |
| 1,975.0               | 4.14            | 215.21      | 1,972.0               | -32.5        | -17.0        | -32.1                   | 0.56                    | -0.52                  | -2.96                 |
| 2,000.0               | 4.05            | 214.22      | 1,996.9               | -33.9        | -18.0        | -33.5                   | 0.46                    | -0.36                  | -3.96                 |
| 2,025.0               | 4.04            | 213.48      | 2,021.9               | -35.4        | -19.0        | -34.9                   | 0.21                    | -0.04                  | -2.96                 |
| 2,050.0               | 4.07            | 214.14      | 2,046.8               | -36.9        | -20.0        | -36.4                   | 0.22                    | 0.12                   | 2.64                  |
| 2,075.0               | 4.12            | 214.13      | 2,071.8               | -38.3        | -21.0        | -37.8                   | 0.20                    | 0.20                   | -0.04                 |
| 2,100.0               | 4.03            | 213.93      | 2,096.7               | -39.8        | -22.0        | -39.3                   | 0.36                    | -0.36                  | -0.80                 |
| 2,125.0               | 4.13            | 214.07      | 2,121.6               | -41.3        | -23.0        | -40.7                   | 0.40                    | 0.40                   | 0.56                  |
| 2,150.0               | 4.03            | 214.23      | 2,146.6               | -42.8        | -24.0        | -42.2                   | 0.40                    | -0.40                  | 0.64                  |
| 2,175.0               | 3.67            | 211.63      | 2,171.5               | -44.2        | -24.9        | -43.6                   | 1.60                    | -1.44                  | -10.40                |
| 2,200.0               | 3.33            | 206.30      | 2,196.5               | -45.5        | -25.7        | -44.9                   | 1.88                    | -1.36                  | -21.32                |
| 2,225.0               | 3.15            | 205.05      | 2,221.4               | -46.8        | -26.3        | -46.1                   | 0.77                    | -0.72                  | -5.00                 |
| 2,250.0               | 2.96            | 203.23      | 2,246.4               | -48.0        | -26.8        | -47.4                   | 0.85                    | -0.76                  | -7.28                 |
| 2,275.0               | 2.88            | 202.81      | 2,271.4               | -49.2        | -27.3        | -48.5                   | 0.33                    | -0.32                  | -1.68                 |
| 2,300.0               | 2.92            | 201.34      | 2,296.3               | -50.3        | -27.8        | -49.7                   | 0.34                    | 0.16                   | -5.88                 |
| 2,325.0               | 2.79            | 204.64      | 2,321.3               | -51.5        | -28.3        | -50.8                   | 0.84                    | -0.52                  | 13.20                 |
| 2,350.0               | 2.73            | 199.86      | 2,346.3               | -52.6        | -28.7        | -51.9                   | 0.95                    | -0.24                  | -19.12                |
| 2,375.0               | 2.82            | 201.34      | 2,371.2               | -53.7        | -29.1        | -53.0                   | 0.46                    | 0.36                   | 5.92                  |
| 2,400.0               | 2.84            | 201.85      | 2,396.2               | -54.9        | -29.6        | -54.2                   | 0.13                    | 0.08                   | 2.04                  |
| 2,425.0               | 2.73            | 202.35      | 2,421.2               | -56.0        | -30.1        | -55.3                   | 0.45                    | -0.44                  | 2.00                  |
| 2,450.0               | 2.71            | 203.76      | 2,446.1               | -57.1        | -30.5        | -56.4                   | 0.28                    | -0.08                  | 5.64                  |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 2,475.0               | 2.81            | 203.65      | 2,471.1               | -58.2        | -31.0        | -57.5                   | 0.40                    | 0.40                   | -0.44                 |
| 2,500.0               | 2.82            | 201.38      | 2,496.1               | -59.3        | -31.5        | -58.6                   | 0.45                    | 0.04                   | -9.08                 |
| 2,525.0               | 2.71            | 200.29      | 2,521.1               | -60.5        | -31.9        | -59.7                   | 0.49                    | -0.44                  | -4.36                 |
| 2,550.0               | 2.67            | 202.49      | 2,546.0               | -61.5        | -32.3        | -60.8                   | 0.44                    | -0.16                  | 8.80                  |
| 2,575.0               | 2.65            | 203.37      | 2,571.0               | -62.6        | -32.8        | -61.8                   | 0.18                    | -0.08                  | 3.52                  |
| 2,600.0               | 2.60            | 205.29      | 2,596.0               | -63.7        | -33.3        | -62.9                   | 0.40                    | -0.20                  | 7.68                  |
| 2,625.0               | 2.22            | 204.28      | 2,621.0               | -64.6        | -33.7        | -63.8                   | 1.53                    | -1.52                  | -4.04                 |
| 2,650.0               | 1.85            | 205.57      | 2,645.9               | -65.4        | -34.1        | -64.6                   | 1.49                    | -1.48                  | 5.16                  |
| 2,675.0               | 1.41            | 205.52      | 2,670.9               | -66.1        | -34.4        | -65.2                   | 1.76                    | -1.76                  | -0.20                 |
| 2,700.0               | 1.16            | 205.20      | 2,695.9               | -66.6        | -34.6        | -65.7                   | 1.00                    | -1.00                  | -1.28                 |
| 2,725.0               | 1.23            | 204.74      | 2,720.9               | -67.0        | -34.8        | -66.2                   | 0.28                    | 0.28                   | -1.84                 |
| 2,750.0               | 1.21            | 199.53      | 2,745.9               | -67.5        | -35.0        | -66.7                   | 0.45                    | -0.08                  | -20.84                |
| 2,775.0               | 1.15            | 204.22      | 2,770.9               | -68.0        | -35.2        | -67.2                   | 0.45                    | -0.24                  | 18.76                 |
| 2,800.0               | 1.20            | 209.65      | 2,795.9               | -68.5        | -35.5        | -67.6                   | 0.49                    | 0.20                   | 21.72                 |
| 2,825.0               | 1.14            | 207.17      | 2,820.9               | -68.9        | -35.7        | -68.1                   | 0.31                    | -0.24                  | -9.92                 |
| 2,850.0               | 1.07            | 214.22      | 2,845.9               | -69.3        | -36.0        | -68.5                   | 0.61                    | -0.28                  | 28.20                 |
| 2,875.0               | 0.93            | 214.98      | 2,870.9               | -69.7        | -36.2        | -68.8                   | 0.56                    | -0.56                  | 3.04                  |
| 2,900.0               | 0.90            | 214.48      | 2,895.9               | -70.0        | -36.4        | -69.1                   | 0.12                    | -0.12                  | -2.00                 |
| 2,925.0               | 0.92            | 230.24      | 2,920.9               | -70.3        | -36.7        | -69.4                   | 1.00                    | 0.08                   | 63.04                 |
| 2,950.0               | 0.75            | 232.24      | 2,945.9               | -70.5        | -37.0        | -69.6                   | 0.69                    | -0.68                  | 8.00                  |
| 2,975.0               | 0.82            | 227.37      | 2,970.9               | -70.8        | -37.2        | -69.9                   | 0.39                    | 0.28                   | -19.48                |
| 3,000.0               | 0.63            | 232.46      | 2,995.9               | -71.0        | -37.5        | -70.1                   | 0.80                    | -0.76                  | 20.36                 |
| 3,025.0               | 0.75            | 229.91      | 3,020.9               | -71.2        | -37.7        | -70.2                   | 0.50                    | 0.48                   | -10.20                |
| 3,050.0               | 0.88            | 234.13      | 3,045.9               | -71.4        | -38.0        | -70.5                   | 0.57                    | 0.52                   | 16.88                 |
| 3,075.0               | 0.85            | 234.20      | 3,070.9               | -71.6        | -38.3        | -70.7                   | 0.12                    | -0.12                  | 0.28                  |
| 3,100.0               | 0.78            | 231.23      | 3,095.9               | -71.8        | -38.6        | -70.9                   | 0.33                    | -0.28                  | -11.88                |
| 3,125.0               | 0.86            | 230.32      | 3,120.9               | -72.0        | -38.9        | -71.1                   | 0.32                    | 0.32                   | -3.64                 |
| 3,150.0               | 0.76            | 235.66      | 3,145.9               | -72.2        | -39.1        | -71.3                   | 0.50                    | -0.40                  | 21.36                 |
| 3,175.0               | 0.72            | 225.88      | 3,170.9               | -72.4        | -39.4        | -71.5                   | 0.53                    | -0.16                  | -39.12                |
| 3,200.0               | 0.80            | 213.54      | 3,195.9               | -72.7        | -39.6        | -71.8                   | 0.73                    | 0.32                   | -49.36                |
| 3,225.0               | 0.91            | 206.37      | 3,220.8               | -73.0        | -39.8        | -72.1                   | 0.61                    | 0.44                   | -28.68                |
| 3,250.0               | 0.93            | 193.85      | 3,245.8               | -73.4        | -39.9        | -72.4                   | 0.81                    | 0.08                   | -50.08                |
| 3,275.0               | 1.04            | 201.99      | 3,270.8               | -73.8        | -40.1        | -72.8                   | 0.71                    | 0.44                   | 32.56                 |
| 3,300.0               | 1.08            | 202.17      | 3,295.8               | -74.2        | -40.2        | -73.3                   | 0.16                    | 0.16                   | 0.72                  |
| 3,325.0               | 0.84            | 198.27      | 3,320.8               | -74.6        | -40.4        | -73.7                   | 0.99                    | -0.96                  | -15.60                |
| 3,350.0               | 0.92            | 181.41      | 3,345.8               | -75.0        | -40.4        | -74.0                   | 1.08                    | 0.32                   | -67.44                |
| 3,375.0               | 0.82            | 181.61      | 3,370.8               | -75.4        | -40.4        | -74.4                   | 0.40                    | -0.40                  | 0.80                  |
| 3,400.0               | 0.78            | 183.49      | 3,395.8               | -75.7        | -40.5        | -74.8                   | 0.19                    | -0.16                  | 7.52                  |
| 3,425.0               | 0.80            | 181.72      | 3,420.8               | -76.1        | -40.5        | -75.1                   | 0.13                    | 0.08                   | -7.08                 |
| 3,450.0               | 0.91            | 184.32      | 3,445.8               | -76.4        | -40.5        | -75.5                   | 0.47                    | 0.44                   | 10.40                 |
| 3,475.0               | 1.02            | 184.88      | 3,470.8               | -76.9        | -40.5        | -75.9                   | 0.44                    | 0.44                   | 2.24                  |
| 3,500.0               | 1.32            | 181.74      | 3,495.8               | -77.4        | -40.6        | -76.4                   | 1.23                    | 1.20                   | -12.56                |
| 3,525.0               | 1.52            | 185.37      | 3,520.8               | -78.0        | -40.6        | -77.0                   | 0.88                    | 0.80                   | 14.52                 |
| 3,550.0               | 1.58            | 188.03      | 3,545.8               | -78.7        | -40.7        | -77.7                   | 0.37                    | 0.24                   | 10.64                 |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 3,575.0               | 1.70            | 189.03      | 3,570.8               | -79.4        | -40.8        | -78.4                   | 0.49                    | 0.48                   | 4.00                  |
| 3,600.0               | 1.62            | 189.15      | 3,595.8               | -80.1        | -40.9        | -79.1                   | 0.32                    | -0.32                  | 0.48                  |
| 3,625.0               | 1.65            | 190.03      | 3,620.8               | -80.8        | -41.0        | -79.8                   | 0.16                    | 0.12                   | 3.52                  |
| 3,650.0               | 1.88            | 193.60      | 3,645.8               | -81.5        | -41.2        | -80.6                   | 1.02                    | 0.92                   | 14.28                 |
| 3,675.0               | 1.93            | 197.85      | 3,670.7               | -82.3        | -41.4        | -81.4                   | 0.60                    | 0.20                   | 17.00                 |
| 3,700.0               | 2.00            | 199.88      | 3,695.7               | -83.2        | -41.7        | -82.2                   | 0.39                    | 0.28                   | 8.12                  |
| 3,725.0               | 1.96            | 204.21      | 3,720.7               | -84.0        | -42.0        | -82.9                   | 0.62                    | -0.16                  | 17.32                 |
| 3,750.0               | 1.85            | 204.99      | 3,745.7               | -84.7        | -42.4        | -83.7                   | 0.45                    | -0.44                  | 3.12                  |
| 3,775.0               | 1.83            | 209.20      | 3,770.7               | -85.4        | -42.7        | -84.4                   | 0.55                    | -0.08                  | 16.84                 |
| 3,800.0               | 1.92            | 207.62      | 3,795.7               | -86.1        | -43.1        | -85.1                   | 0.42                    | 0.36                   | -6.32                 |
| 3,825.0               | 1.73            | 205.73      | 3,820.7               | -86.9        | -43.5        | -85.8                   | 0.80                    | -0.76                  | -7.56                 |
| 3,850.0               | 1.73            | 203.15      | 3,845.6               | -87.5        | -43.8        | -86.5                   | 0.31                    | 0.00                   | -10.32                |
| 3,875.0               | 1.84            | 208.07      | 3,870.6               | -88.2        | -44.1        | -87.2                   | 0.75                    | 0.44                   | 19.68                 |
| 3,900.0               | 1.70            | 203.74      | 3,895.6               | -88.9        | -44.4        | -87.9                   | 0.77                    | -0.56                  | -17.32                |
| 3,925.0               | 1.59            | 191.34      | 3,920.6               | -89.6        | -44.7        | -88.5                   | 1.49                    | -0.44                  | -49.60                |
| 3,950.0               | 1.64            | 189.62      | 3,945.6               | -90.3        | -44.8        | -89.2                   | 0.28                    | 0.20                   | -6.88                 |
| 3,975.0               | 1.71            | 182.53      | 3,970.6               | -91.0        | -44.9        | -90.0                   | 0.87                    | 0.28                   | -28.36                |
| 4,000.0               | 1.77            | 178.09      | 3,995.6               | -91.8        | -44.9        | -90.7                   | 0.59                    | 0.24                   | -17.76                |
| 4,025.0               | 1.84            | 184.44      | 4,020.6               | -92.6        | -44.9        | -91.5                   | 0.85                    | 0.28                   | 25.40                 |
| 4,050.0               | 2.38            | 188.38      | 4,045.5               | -93.5        | -45.0        | -92.4                   | 2.24                    | 2.16                   | 15.76                 |
| 4,075.0               | 1.94            | 182.65      | 4,070.5               | -94.4        | -45.1        | -93.3                   | 1.96                    | -1.76                  | -22.92                |
| 4,100.0               | 1.99            | 179.24      | 4,095.5               | -95.3        | -45.1        | -94.2                   | 0.51                    | 0.20                   | -13.64                |
| 4,125.0               | 2.02            | 179.55      | 4,120.5               | -96.2        | -45.1        | -95.1                   | 0.13                    | 0.12                   | 1.24                  |
| 4,150.0               | 2.01            | 177.12      | 4,145.5               | -97.0        | -45.1        | -96.0                   | 0.34                    | -0.04                  | -9.72                 |
| 4,175.0               | 2.00            | 178.17      | 4,170.5               | -97.9        | -45.0        | -96.8                   | 0.15                    | -0.04                  | 4.20                  |
| 4,200.0               | 2.19            | 175.01      | 4,195.5               | -98.8        | -45.0        | -97.7                   | 0.89                    | 0.76                   | -12.64                |
| 4,225.0               | 2.40            | 176.57      | 4,220.4               | -99.8        | -44.9        | -98.7                   | 0.88                    | 0.84                   | 6.24                  |
| 4,250.0               | 2.50            | 176.44      | 4,245.4               | -100.9       | -44.8        | -99.8                   | 0.40                    | 0.40                   | -0.52                 |
| 4,275.0               | 2.60            | 177.23      | 4,270.4               | -102.0       | -44.8        | -100.9                  | 0.42                    | 0.40                   | 3.16                  |
| 4,300.0               | 2.65            | 176.60      | 4,295.4               | -103.1       | -44.7        | -102.1                  | 0.23                    | 0.20                   | -2.52                 |
| 4,325.0               | 2.78            | 176.08      | 4,320.3               | -104.3       | -44.6        | -103.2                  | 0.53                    | 0.52                   | -2.08                 |
| 4,350.0               | 2.92            | 172.67      | 4,345.3               | -105.6       | -44.5        | -104.5                  | 0.88                    | 0.56                   | -13.64                |
| 4,375.0               | 2.89            | 175.62      | 4,370.3               | -106.8       | -44.4        | -105.8                  | 0.61                    | -0.12                  | 11.80                 |
| 4,400.0               | 3.09            | 172.93      | 4,395.2               | -108.1       | -44.3        | -107.1                  | 0.98                    | 0.80                   | -10.76                |
| 4,425.0               | 3.01            | 177.60      | 4,420.2               | -109.4       | -44.2        | -108.4                  | 1.04                    | -0.32                  | 18.68                 |
| 4,450.0               | 2.97            | 178.26      | 4,445.2               | -110.7       | -44.1        | -109.7                  | 0.21                    | -0.16                  | 2.64                  |
| 4,475.0               | 2.87            | 182.72      | 4,470.1               | -112.0       | -44.1        | -111.0                  | 0.99                    | -0.40                  | 17.84                 |
| 4,500.0               | 2.81            | 185.32      | 4,495.1               | -113.3       | -44.2        | -112.2                  | 0.57                    | -0.24                  | 10.40                 |
| 4,525.0               | 2.81            | 187.06      | 4,520.1               | -114.5       | -44.3        | -113.4                  | 0.34                    | 0.00                   | 6.96                  |
| 4,550.0               | 2.76            | 187.21      | 4,545.0               | -115.7       | -44.5        | -114.6                  | 0.20                    | -0.20                  | 0.60                  |
| 4,575.0               | 2.56            | 187.05      | 4,570.0               | -116.8       | -44.6        | -115.8                  | 0.80                    | -0.80                  | -0.64                 |
| 4,600.0               | 2.50            | 185.79      | 4,595.0               | -117.9       | -44.8        | -116.8                  | 0.33                    | -0.24                  | -5.04                 |
| 4,625.0               | 2.45            | 183.71      | 4,620.0               | -119.0       | -44.8        | -117.9                  | 0.41                    | -0.20                  | -8.32                 |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,650.0               | 2.35            | 183.50      | 4,644.9               | -120.0       | -44.9        | -119.0                  | 0.40                    | -0.40                  | -0.84                 |
| 4,675.0               | 2.39            | 183.70      | 4,669.9               | -121.1       | -45.0        | -120.0                  | 0.16                    | 0.16                   | 0.80                  |
| 4,700.0               | 2.44            | 184.02      | 4,694.9               | -122.1       | -45.0        | -121.0                  | 0.21                    | 0.20                   | 1.28                  |
| 4,725.0               | 2.47            | 185.06      | 4,719.9               | -123.2       | -45.1        | -122.1                  | 0.21                    | 0.12                   | 4.16                  |
| 4,750.0               | 2.56            | 198.56      | 4,744.9               | -124.3       | -45.4        | -123.2                  | 2.39                    | 0.36                   | 54.00                 |
| 4,775.0               | 2.93            | 212.80      | 4,769.8               | -125.3       | -45.9        | -124.2                  | 3.09                    | 1.48                   | 56.96                 |
| 4,800.0               | 3.24            | 220.96      | 4,794.8               | -126.4       | -46.7        | -125.3                  | 2.15                    | 1.24                   | 32.64                 |
| 4,825.0               | 3.29            | 221.49      | 4,819.8               | -127.5       | -47.6        | -126.3                  | 0.23                    | 0.20                   | 2.12                  |
| 4,850.0               | 3.30            | 220.78      | 4,844.7               | -128.6       | -48.6        | -127.4                  | 0.17                    | 0.04                   | -2.84                 |
| 4,875.0               | 3.32            | 222.82      | 4,869.7               | -129.6       | -49.5        | -128.4                  | 0.48                    | 0.08                   | 8.16                  |
| 4,900.0               | 3.29            | 222.97      | 4,894.6               | -130.7       | -50.5        | -129.5                  | 0.12                    | -0.12                  | 0.60                  |
| 4,925.0               | 3.39            | 223.94      | 4,919.6               | -131.7       | -51.5        | -130.5                  | 0.46                    | 0.40                   | 3.88                  |
| 4,950.0               | 3.35            | 225.13      | 4,944.5               | -132.8       | -52.5        | -131.5                  | 0.32                    | -0.16                  | 4.76                  |
| 4,975.0               | 3.39            | 224.52      | 4,969.5               | -133.8       | -53.6        | -132.5                  | 0.21                    | 0.16                   | -2.44                 |
| 5,000.0               | 3.42            | 222.38      | 4,994.5               | -134.9       | -54.6        | -133.6                  | 0.52                    | 0.12                   | -8.56                 |
| 5,025.0               | 3.38            | 224.29      | 5,019.4               | -136.0       | -55.6        | -134.6                  | 0.48                    | -0.16                  | 7.64                  |
| 5,050.0               | 3.07            | 223.75      | 5,044.4               | -137.0       | -56.6        | -135.6                  | 1.25                    | -1.24                  | -2.16                 |
| 5,075.0               | 2.37            | 217.42      | 5,069.3               | -137.9       | -57.4        | -136.5                  | 3.04                    | -2.80                  | -25.32                |
| 5,100.0               | 2.15            | 213.80      | 5,094.3               | -138.7       | -57.9        | -137.3                  | 1.05                    | -0.88                  | -14.48                |
| 5,125.0               | 2.10            | 212.67      | 5,119.3               | -139.5       | -58.5        | -138.1                  | 0.26                    | -0.20                  | -4.52                 |
| 5,150.0               | 2.07            | 210.94      | 5,144.3               | -140.2       | -58.9        | -138.8                  | 0.28                    | -0.12                  | -6.92                 |
| 5,175.0               | 2.13            | 212.32      | 5,169.3               | -141.0       | -59.4        | -139.6                  | 0.31                    | 0.24                   | 5.52                  |
| 5,200.0               | 2.13            | 211.26      | 5,194.3               | -141.8       | -59.9        | -140.4                  | 0.16                    | 0.00                   | -4.24                 |
| 5,225.0               | 2.11            | 210.83      | 5,219.2               | -142.6       | -60.4        | -141.1                  | 0.10                    | -0.08                  | -1.72                 |
| 5,250.0               | 2.18            | 210.25      | 5,244.2               | -143.4       | -60.9        | -141.9                  | 0.29                    | 0.28                   | -2.32                 |
| 5,275.0               | 2.18            | 209.13      | 5,269.2               | -144.2       | -61.3        | -142.8                  | 0.17                    | 0.00                   | -4.48                 |
| 5,300.0               | 2.22            | 209.67      | 5,294.2               | -145.1       | -61.8        | -143.6                  | 0.18                    | 0.16                   | 2.16                  |
| 5,325.0               | 2.27            | 209.52      | 5,319.2               | -145.9       | -62.3        | -144.4                  | 0.20                    | 0.20                   | -0.60                 |
| 5,350.0               | 2.31            | 209.80      | 5,344.1               | -146.8       | -62.8        | -145.3                  | 0.17                    | 0.16                   | 1.12                  |
| 5,375.0               | 2.11            | 211.18      | 5,369.1               | -147.6       | -63.3        | -146.1                  | 0.83                    | -0.80                  | 5.52                  |
| 5,400.0               | 2.24            | 204.31      | 5,394.1               | -148.5       | -63.7        | -146.9                  | 1.16                    | 0.52                   | -27.48                |
| 5,425.0               | 2.19            | 208.09      | 5,419.1               | -149.3       | -64.1        | -147.8                  | 0.62                    | -0.20                  | 15.12                 |
| 5,450.0               | 2.23            | 204.53      | 5,444.1               | -150.2       | -64.6        | -148.6                  | 0.57                    | 0.16                   | -14.24                |
| 5,475.0               | 2.16            | 202.20      | 5,469.1               | -151.1       | -64.9        | -149.5                  | 0.45                    | -0.28                  | -9.32                 |
| 5,500.0               | 2.15            | 205.23      | 5,494.0               | -151.9       | -65.3        | -150.4                  | 0.46                    | -0.04                  | 12.12                 |
| 5,525.0               | 1.94            | 215.17      | 5,519.0               | -152.7       | -65.8        | -151.1                  | 1.65                    | -0.84                  | 39.76                 |
| 5,550.0               | 1.89            | 227.72      | 5,544.0               | -153.3       | -66.3        | -151.7                  | 1.69                    | -0.20                  | 50.20                 |
| 5,575.0               | 1.91            | 235.76      | 5,569.0               | -153.8       | -67.0        | -152.2                  | 1.07                    | 0.08                   | 32.16                 |
| 5,600.0               | 1.86            | 241.68      | 5,594.0               | -154.3       | -67.7        | -152.6                  | 0.80                    | -0.20                  | 23.68                 |
| 5,625.0               | 1.93            | 239.00      | 5,619.0               | -154.7       | -68.4        | -153.0                  | 0.45                    | 0.28                   | -10.72                |
| 5,650.0               | 2.06            | 242.00      | 5,643.9               | -155.1       | -69.1        | -153.4                  | 0.67                    | 0.52                   | 12.00                 |
| 5,675.0               | 2.19            | 241.67      | 5,668.9               | -155.5       | -70.0        | -153.9                  | 0.52                    | 0.52                   | -1.32                 |
| 5,700.0               | 2.43            | 239.35      | 5,693.9               | -156.0       | -70.8        | -154.3                  | 1.03                    | 0.96                   | -9.28                 |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,725.0               | 2.86            | 237.96      | 5,718.9               | -156.6       | -71.8        | -154.9                  | 1.74                    | 1.72                   | -5.56                 |
| 5,750.0               | 2.96            | 236.12      | 5,743.9               | -157.3       | -72.9        | -155.6                  | 0.55                    | 0.40                   | -7.36                 |
| 5,775.0               | 3.01            | 235.85      | 5,768.8               | -158.1       | -74.0        | -156.3                  | 0.21                    | 0.20                   | -1.08                 |
| 5,800.0               | 2.98            | 236.42      | 5,793.8               | -158.8       | -75.0        | -157.0                  | 0.17                    | -0.12                  | 2.28                  |
| 5,825.0               | 3.00            | 236.15      | 5,818.7               | -159.5       | -76.1        | -157.7                  | 0.10                    | 0.08                   | -1.08                 |
| 5,850.0               | 3.09            | 234.25      | 5,843.7               | -160.3       | -77.2        | -158.4                  | 0.54                    | 0.36                   | -7.60                 |
| 5,875.0               | 3.08            | 234.78      | 5,868.7               | -161.0       | -78.3        | -159.2                  | 0.12                    | -0.04                  | 2.12                  |
| 5,900.0               | 3.11            | 228.98      | 5,893.6               | -161.9       | -79.4        | -160.0                  | 1.26                    | 0.12                   | -23.20                |
| 5,925.0               | 3.24            | 228.65      | 5,918.6               | -162.8       | -80.4        | -160.9                  | 0.53                    | 0.52                   | -1.32                 |
| 5,950.0               | 3.20            | 227.44      | 5,943.6               | -163.7       | -81.5        | -161.8                  | 0.32                    | -0.16                  | -4.84                 |
| 5,975.0               | 3.10            | 227.54      | 5,968.5               | -164.7       | -82.5        | -162.7                  | 0.40                    | -0.40                  | 0.40                  |
| 6,000.0               | 3.19            | 227.84      | 5,993.5               | -165.6       | -83.5        | -163.6                  | 0.37                    | 0.36                   | 1.20                  |
| 6,025.0               | 3.31            | 228.41      | 6,018.4               | -166.5       | -84.5        | -164.5                  | 0.50                    | 0.48                   | 2.28                  |
| 6,050.0               | 3.28            | 226.93      | 6,043.4               | -167.5       | -85.6        | -165.4                  | 0.36                    | -0.12                  | -5.92                 |
| 6,075.0               | 3.35            | 227.75      | 6,068.4               | -168.5       | -86.7        | -166.4                  | 0.34                    | 0.28                   | 3.28                  |
| 6,100.0               | 3.33            | 226.94      | 6,093.3               | -169.5       | -87.7        | -167.4                  | 0.21                    | -0.08                  | -3.24                 |
| 6,125.0               | 3.34            | 226.98      | 6,118.3               | -170.5       | -88.8        | -168.3                  | 0.04                    | 0.04                   | 0.16                  |
| 6,150.0               | 3.24            | 226.78      | 6,143.2               | -171.4       | -89.9        | -169.3                  | 0.40                    | -0.40                  | -0.80                 |
| 6,175.0               | 3.21            | 226.51      | 6,168.2               | -172.4       | -90.9        | -170.2                  | 0.13                    | -0.12                  | -1.08                 |
| 6,200.0               | 3.17            | 226.75      | 6,193.2               | -173.4       | -91.9        | -171.1                  | 0.17                    | -0.16                  | 0.96                  |
| 6,225.0               | 3.20            | 225.84      | 6,218.1               | -174.3       | -92.9        | -172.1                  | 0.24                    | 0.12                   | -3.64                 |
| 6,250.0               | 3.15            | 224.76      | 6,243.1               | -175.3       | -93.9        | -173.0                  | 0.31                    | -0.20                  | -4.32                 |
| 6,275.0               | 3.11            | 224.91      | 6,268.0               | -176.3       | -94.8        | -174.0                  | 0.16                    | -0.16                  | 0.60                  |
| 6,300.0               | 3.07            | 226.47      | 6,293.0               | -177.2       | -95.8        | -174.9                  | 0.37                    | -0.16                  | 6.24                  |
| 6,325.0               | 3.12            | 226.22      | 6,318.0               | -178.1       | -96.8        | -175.8                  | 0.21                    | 0.20                   | -1.00                 |
| 6,350.0               | 3.33            | 223.03      | 6,342.9               | -179.1       | -97.8        | -176.8                  | 1.10                    | 0.84                   | -12.76                |
| 6,375.0               | 3.72            | 215.85      | 6,367.9               | -180.3       | -98.7        | -178.0                  | 2.35                    | 1.56                   | -28.72                |
| 6,400.0               | 4.06            | 213.27      | 6,392.8               | -181.7       | -99.7        | -179.3                  | 1.53                    | 1.36                   | -10.32                |
| 6,425.0               | 4.21            | 211.55      | 6,417.8               | -183.2       | -100.7       | -180.8                  | 0.78                    | 0.60                   | -6.88                 |
| 6,450.0               | 4.22            | 210.92      | 6,442.7               | -184.8       | -101.6       | -182.4                  | 0.19                    | 0.04                   | -2.52                 |
| 6,475.0               | 4.16            | 210.70      | 6,467.6               | -186.4       | -102.5       | -183.9                  | 0.25                    | -0.24                  | -0.88                 |
| 6,500.0               | 4.14            | 211.35      | 6,492.6               | -187.9       | -103.5       | -185.4                  | 0.20                    | -0.08                  | 2.60                  |
| 6,525.0               | 4.17            | 212.71      | 6,517.5               | -189.5       | -104.4       | -187.0                  | 0.41                    | 0.12                   | 5.44                  |
| 6,550.0               | 3.58            | 215.99      | 6,542.4               | -190.9       | -105.4       | -188.3                  | 2.52                    | -2.36                  | 13.12                 |
| 6,575.0               | 3.40            | 225.75      | 6,567.4               | -192.0       | -106.4       | -189.5                  | 2.48                    | -0.72                  | 39.04                 |
| 6,600.0               | 3.02            | 225.06      | 6,592.4               | -193.0       | -107.4       | -190.4                  | 1.53                    | -1.52                  | -2.76                 |
| 6,625.0               | 3.05            | 225.02      | 6,617.3               | -193.9       | -108.3       | -191.3                  | 0.12                    | 0.12                   | -0.16                 |
| 6,650.0               | 3.09            | 226.16      | 6,642.3               | -194.9       | -109.3       | -192.2                  | 0.29                    | 0.16                   | 4.56                  |
| 6,675.0               | 3.15            | 223.01      | 6,667.2               | -195.8       | -110.2       | -193.2                  | 0.73                    | 0.24                   | -12.60                |
| 6,700.0               | 3.13            | 224.24      | 6,692.2               | -196.8       | -111.2       | -194.2                  | 0.28                    | -0.08                  | 4.92                  |
| 6,725.0               | 2.99            | 222.49      | 6,717.2               | -197.8       | -112.1       | -195.1                  | 0.67                    | -0.56                  | -7.00                 |
| 6,750.0               | 2.86            | 224.78      | 6,742.1               | -198.7       | -113.0       | -196.0                  | 0.70                    | -0.52                  | 9.16                  |
| 6,775.0               | 2.72            | 225.34      | 6,767.1               | -199.6       | -113.8       | -196.8                  | 0.57                    | -0.56                  | 2.24                  |
| 6,800.0               | 2.82            | 226.01      | 6,792.1               | -200.4       | -114.7       | -197.7                  | 0.42                    | 0.40                   | 2.68                  |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 6,825.0               | 2.82            | 226.35      | 6,817.1               | -201.3       | -115.6       | -198.5                  | 0.07                    | 0.00                   | 1.36                  |
| 6,850.0               | 2.88            | 225.86      | 6,842.0               | -202.1       | -116.5       | -199.3                  | 0.26                    | 0.24                   | -1.96                 |
| 6,875.0               | 2.88            | 220.56      | 6,867.0               | -203.1       | -117.3       | -200.2                  | 1.06                    | 0.00                   | -21.20                |
| 6,900.0               | 3.13            | 214.48      | 6,892.0               | -204.1       | -118.1       | -201.3                  | 1.62                    | 1.00                   | -24.32                |
| 6,925.0               | 3.32            | 214.47      | 6,916.9               | -205.2       | -118.9       | -202.4                  | 0.76                    | 0.76                   | -0.04                 |
| 6,950.0               | 3.36            | 215.73      | 6,941.9               | -206.4       | -119.8       | -203.6                  | 0.33                    | 0.16                   | 5.04                  |
| 6,975.0               | 3.61            | 213.82      | 6,966.8               | -207.7       | -120.6       | -204.8                  | 1.10                    | 1.00                   | -7.64                 |
| 7,000.0               | 3.61            | 214.54      | 6,991.8               | -209.0       | -121.5       | -206.1                  | 0.18                    | 0.00                   | 2.88                  |
| 7,025.0               | 3.70            | 214.53      | 7,016.7               | -210.3       | -122.4       | -207.4                  | 0.36                    | 0.36                   | -0.04                 |
| 7,050.0               | 3.79            | 215.46      | 7,041.7               | -211.6       | -123.4       | -208.7                  | 0.43                    | 0.36                   | 3.72                  |
| 7,075.0               | 3.96            | 214.94      | 7,066.6               | -213.0       | -124.3       | -210.0                  | 0.69                    | 0.68                   | -2.08                 |
| 7,100.0               | 4.05            | 214.47      | 7,091.6               | -214.5       | -125.3       | -211.5                  | 0.38                    | 0.36                   | -1.88                 |
| 7,125.0               | 4.20            | 216.40      | 7,116.5               | -215.9       | -126.4       | -212.9                  | 0.82                    | 0.60                   | 7.72                  |
| 7,150.0               | 4.13            | 215.74      | 7,141.4               | -217.4       | -127.4       | -214.3                  | 0.34                    | -0.28                  | -2.64                 |
| 7,175.0               | 4.25            | 215.66      | 7,166.4               | -218.9       | -128.5       | -215.8                  | 0.48                    | 0.48                   | -0.32                 |
| 7,200.0               | 4.25            | 214.31      | 7,191.3               | -220.4       | -129.6       | -217.3                  | 0.40                    | 0.00                   | -5.40                 |
| 7,225.0               | 4.21            | 215.49      | 7,216.2               | -221.9       | -130.6       | -218.8                  | 0.38                    | -0.16                  | 4.72                  |
| 7,250.0               | 4.18            | 213.82      | 7,241.2               | -223.4       | -131.7       | -220.3                  | 0.50                    | -0.12                  | -6.68                 |
| 7,275.0               | 4.18            | 214.27      | 7,266.1               | -224.9       | -132.7       | -221.7                  | 0.13                    | 0.00                   | 1.80                  |
| 7,300.0               | 4.21            | 214.80      | 7,291.0               | -226.4       | -133.7       | -223.2                  | 0.20                    | 0.12                   | 2.12                  |
| 7,325.0               | 4.35            | 214.09      | 7,316.0               | -228.0       | -134.8       | -224.7                  | 0.60                    | 0.56                   | -2.84                 |
| 7,350.0               | 4.36            | 216.33      | 7,340.9               | -229.5       | -135.9       | -226.3                  | 0.68                    | 0.04                   | 8.96                  |
| 7,375.0               | 3.18            | 214.48      | 7,365.8               | -230.9       | -136.8       | -227.6                  | 4.74                    | -4.72                  | -7.40                 |
| 7,400.0               | 2.98            | 214.14      | 7,390.8               | -232.0       | -137.6       | -228.7                  | 0.80                    | -0.80                  | -1.36                 |
| 7,425.0               | 2.73            | 214.62      | 7,415.8               | -233.0       | -138.3       | -229.7                  | 1.00                    | -1.00                  | 1.92                  |
| 7,450.0               | 2.66            | 212.66      | 7,440.7               | -234.0       | -138.9       | -230.6                  | 0.46                    | -0.28                  | -7.84                 |
| 7,475.0               | 2.65            | 213.48      | 7,465.7               | -234.9       | -139.6       | -231.6                  | 0.16                    | -0.04                  | 3.28                  |
| 7,500.0               | 2.69            | 212.94      | 7,490.7               | -235.9       | -140.2       | -232.6                  | 0.19                    | 0.16                   | -2.16                 |
| 7,525.0               | 2.50            | 216.30      | 7,515.6               | -236.8       | -140.8       | -233.5                  | 0.97                    | -0.76                  | 13.44                 |
| 7,550.0               | 2.46            | 217.16      | 7,540.6               | -237.7       | -141.5       | -234.3                  | 0.22                    | -0.16                  | 3.44                  |
| 7,575.0               | 2.57            | 218.42      | 7,565.6               | -238.6       | -142.2       | -235.2                  | 0.49                    | 0.44                   | 5.04                  |
| 7,600.0               | 2.54            | 214.51      | 7,590.6               | -239.5       | -142.8       | -236.1                  | 0.71                    | -0.12                  | -15.64                |
| 7,625.0               | 2.53            | 215.54      | 7,615.6               | -240.4       | -143.5       | -236.9                  | 0.19                    | -0.04                  | 4.12                  |
| 7,650.0               | 2.47            | 213.56      | 7,640.5               | -241.3       | -144.1       | -237.8                  | 0.42                    | -0.24                  | -7.92                 |
| 7,675.0               | 2.41            | 216.52      | 7,665.5               | -242.1       | -144.7       | -238.7                  | 0.56                    | -0.24                  | 11.84                 |
| 7,700.0               | 2.42            | 216.27      | 7,690.5               | -243.0       | -145.3       | -239.5                  | 0.06                    | 0.04                   | -1.00                 |
| 7,725.0               | 2.36            | 214.50      | 7,715.5               | -243.8       | -145.9       | -240.3                  | 0.38                    | -0.24                  | -7.08                 |
| 7,750.0               | 2.49            | 214.93      | 7,740.4               | -244.7       | -146.5       | -241.2                  | 0.53                    | 0.52                   | 1.72                  |
| 7,775.0               | 2.49            | 214.94      | 7,765.4               | -245.6       | -147.1       | -242.1                  | 0.00                    | 0.00                   | 0.04                  |
| 7,800.0               | 2.46            | 215.87      | 7,790.4               | -246.5       | -147.8       | -242.9                  | 0.20                    | -0.12                  | 3.72                  |
| 7,825.0               | 2.40            | 212.91      | 7,815.4               | -247.4       | -148.4       | -243.8                  | 0.56                    | -0.24                  | -11.84                |
| 7,850.0               | 2.38            | 214.56      | 7,840.3               | -248.2       | -148.9       | -244.7                  | 0.29                    | -0.08                  | 6.60                  |
| 7,875.0               | 2.37            | 215.42      | 7,865.3               | -249.1       | -149.5       | -245.5                  | 0.15                    | -0.04                  | 3.44                  |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 7,900.0               | 2.50            | 216.83      | 7,890.3               | -249.9       | -150.2       | -246.3                  | 0.57                    | 0.52                   | 5.64                  |
| 7,925.0               | 2.56            | 216.07      | 7,915.3               | -250.8       | -150.8       | -247.2                  | 0.27                    | 0.24                   | -3.04                 |
| 7,950.0               | 2.52            | 213.80      | 7,940.3               | -251.7       | -151.5       | -248.1                  | 0.43                    | -0.16                  | -9.08                 |
| 7,975.0               | 2.54            | 212.03      | 7,965.2               | -252.7       | -152.1       | -249.0                  | 0.32                    | 0.08                   | -7.08                 |
| 8,000.0               | 2.36            | 211.19      | 7,990.2               | -253.6       | -152.6       | -249.9                  | 0.73                    | -0.72                  | -3.36                 |
| 8,025.0               | 2.42            | 212.25      | 8,015.2               | -254.5       | -153.2       | -250.8                  | 0.30                    | 0.24                   | 4.24                  |
| 8,050.0               | 2.47            | 212.68      | 8,040.2               | -255.4       | -153.7       | -251.7                  | 0.21                    | 0.20                   | 1.72                  |
| 8,075.0               | 2.59            | 209.60      | 8,065.1               | -256.3       | -154.3       | -252.6                  | 0.73                    | 0.48                   | -12.32                |
| 8,100.0               | 2.56            | 207.51      | 8,090.1               | -257.3       | -154.8       | -253.6                  | 0.39                    | -0.12                  | -8.36                 |
| 8,125.0               | 2.54            | 207.77      | 8,115.1               | -258.3       | -155.4       | -254.5                  | 0.09                    | -0.08                  | 1.04                  |
| 8,150.0               | 2.47            | 208.56      | 8,140.1               | -259.2       | -155.9       | -255.5                  | 0.31                    | -0.28                  | 3.16                  |
| 8,175.0               | 2.60            | 208.58      | 8,165.0               | -260.2       | -156.4       | -256.5                  | 0.52                    | 0.52                   | 0.08                  |
| 8,200.0               | 2.72            | 207.64      | 8,190.0               | -261.2       | -156.9       | -257.5                  | 0.51                    | 0.48                   | -3.76                 |
| 8,225.0               | 2.78            | 207.87      | 8,215.0               | -262.3       | -157.5       | -258.5                  | 0.24                    | 0.24                   | 0.92                  |
| 8,250.0               | 2.72            | 204.07      | 8,240.0               | -263.4       | -158.0       | -259.6                  | 0.77                    | -0.24                  | -15.20                |
| 8,275.0               | 2.71            | 202.11      | 8,264.9               | -264.5       | -158.5       | -260.7                  | 0.37                    | -0.04                  | -7.84                 |
| 8,300.0               | 2.58            | 200.49      | 8,289.9               | -265.5       | -158.9       | -261.7                  | 0.60                    | -0.52                  | -6.48                 |
| 8,325.0               | 2.53            | 201.06      | 8,314.9               | -266.6       | -159.3       | -262.8                  | 0.22                    | -0.20                  | 2.28                  |
| 8,350.0               | 2.52            | 202.60      | 8,339.9               | -267.6       | -159.7       | -263.8                  | 0.27                    | -0.04                  | 6.16                  |
| 8,375.0               | 2.48            | 203.31      | 8,364.8               | -268.6       | -160.1       | -264.8                  | 0.20                    | -0.16                  | 2.84                  |
| 8,400.0               | 2.27            | 200.92      | 8,389.8               | -269.6       | -160.5       | -265.7                  | 0.93                    | -0.84                  | -9.56                 |
| 8,425.0               | 2.17            | 201.13      | 8,414.8               | -270.5       | -160.9       | -266.6                  | 0.40                    | -0.40                  | 0.84                  |
| 8,450.0               | 2.05            | 203.70      | 8,439.8               | -271.3       | -161.2       | -267.4                  | 0.61                    | -0.48                  | 10.28                 |
| 8,475.0               | 2.12            | 207.69      | 8,464.8               | -272.1       | -161.6       | -268.3                  | 0.64                    | 0.28                   | 15.96                 |
| 8,955.0               | 0.68            | 267.31      | 8,944.6               | -280.1       | -168.6       | -276.1                  | 0.39                    | -0.30                  | 12.42                 |
| 8,986.0               | 2.17            | 346.84      | 8,975.6               | -279.6       | -168.9       | -275.5                  | 6.94                    | 4.81                   | 256.55                |
| 9,017.0               | 5.01            | 2.60        | 9,006.5               | -277.6       | -169.0       | -273.6                  | 9.61                    | 9.16                   | 50.84                 |
| 9,048.0               | 7.73            | 4.66        | 9,037.4               | -274.2       | -168.8       | -270.2                  | 8.80                    | 8.77                   | 6.65                  |
| 9,078.0               | 9.92            | 10.55       | 9,067.0               | -269.7       | -168.1       | -265.6                  | 7.89                    | 7.30                   | 19.63                 |
| 9,108.0               | 13.12           | 6.34        | 9,096.4               | -263.7       | -167.3       | -259.7                  | 11.02                   | 10.67                  | -14.03                |
| 9,139.0               | 16.91           | 4.87        | 9,126.3               | -255.7       | -166.5       | -251.8                  | 12.29                   | 12.23                  | -4.74                 |
| 9,171.0               | 19.22           | 0.67        | 9,156.7               | -245.8       | -166.0       | -241.9                  | 8.28                    | 7.22                   | -13.13                |
| 9,201.0               | 21.49           | 357.95      | 9,184.9               | -235.4       | -166.2       | -231.4                  | 8.20                    | 7.57                   | -9.07                 |
| 9,232.0               | 23.06           | 358.54      | 9,213.6               | -223.7       | -166.5       | -219.7                  | 5.12                    | 5.06                   | 1.90                  |
| 9,263.0               | 24.05           | 358.89      | 9,242.0               | -211.3       | -166.8       | -207.3                  | 3.23                    | 3.19                   | 1.13                  |
| 9,295.0               | 27.01           | 358.39      | 9,270.8               | -197.5       | -167.1       | -193.5                  | 9.27                    | 9.25                   | -1.56                 |
| 9,325.0               | 30.27           | 359.36      | 9,297.2               | -183.1       | -167.4       | -179.1                  | 10.98                   | 10.87                  | 3.23                  |
| 9,356.0               | 33.97           | 359.46      | 9,323.4               | -166.6       | -167.6       | -162.6                  | 11.94                   | 11.94                  | 0.32                  |
| 9,387.0               | 37.18           | 359.51      | 9,348.6               | -148.6       | -167.8       | -144.6                  | 10.36                   | 10.35                  | 0.16                  |
| 9,419.0               | 40.96           | 357.92      | 9,373.5               | -128.4       | -168.2       | -124.5                  | 12.22                   | 11.81                  | -4.97                 |
| 9,450.0               | 44.65           | 356.62      | 9,396.2               | -107.4       | -169.2       | -103.4                  | 12.24                   | 11.90                  | -4.19                 |
| 9,481.0               | 48.83           | 356.42      | 9,417.5               | -84.9        | -170.6       | -80.8                   | 13.49                   | 13.48                  | -0.65                 |
| 9,511.0               | 53.03           | 357.19      | 9,436.4               | -61.6        | -171.9       | -57.6                   | 14.14                   | 14.00                  | 2.57                  |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,542.0               | 57.10           | 357.34      | 9,454.1               | -36.2        | -173.1       | -32.2                   | 13.14                   | 13.13                  | 0.48                  |
| 9,572.0               | 61.25           | 358.02      | 9,469.5               | -10.5        | -174.1       | -6.4                    | 13.97                   | 13.83                  | 2.27                  |
| 9,604.0               | 63.30           | 358.62      | 9,484.4               | 17.8         | -175.0       | 21.9                    | 6.62                    | 6.41                   | 1.88                  |
| 9,635.0               | 65.34           | 358.54      | 9,497.8               | 45.7         | -175.7       | 49.8                    | 6.58                    | 6.58                   | -0.26                 |
| 9,665.0               | 67.67           | 359.20      | 9,509.8               | 73.2         | -176.2       | 77.4                    | 8.02                    | 7.77                   | 2.20                  |
| 9,696.0               | 67.75           | 359.28      | 9,521.5               | 101.9        | -176.6       | 106.0                   | 0.35                    | 0.26                   | 0.26                  |
| 9,727.0               | 68.37           | 358.81      | 9,533.1               | 130.7        | -177.1       | 134.8                   | 2.44                    | 2.00                   | -1.52                 |
| 9,759.0               | 71.48           | 359.41      | 9,544.1               | 160.7        | -177.5       | 164.8                   | 9.88                    | 9.72                   | 1.88                  |
| 9,789.0               | 72.79           | 0.01        | 9,553.3               | 189.3        | -177.7       | 193.4                   | 4.76                    | 4.37                   | 2.00                  |
| 9,821.0               | 74.96           | 0.29        | 9,562.2               | 220.0        | -177.6       | 224.1                   | 6.83                    | 6.78                   | 0.88                  |
| 9,852.0               | 79.33           | 0.87        | 9,569.1               | 250.2        | -177.3       | 254.3                   | 14.21                   | 14.10                  | 1.87                  |
| 9,883.0               | 81.74           | 0.79        | 9,574.2               | 280.8        | -176.8       | 284.9                   | 7.78                    | 7.77                   | -0.26                 |
| 9,913.0               | 82.80           | 0.28        | 9,578.2               | 310.5        | -176.6       | 314.6                   | 3.91                    | 3.53                   | -1.70                 |
| 9,944.0               | 83.57           | 359.80      | 9,581.9               | 341.3        | -176.5       | 345.4                   | 2.92                    | 2.48                   | -1.55                 |
| 9,976.0               | 83.56           | 359.72      | 9,585.5               | 373.1        | -176.7       | 377.1                   | 0.25                    | -0.03                  | -0.25                 |
| 10,004.0              | 84.34           | 359.15      | 9,588.4               | 400.9        | -177.0       | 405.0                   | 3.44                    | 2.79                   | -2.04                 |
| 10,066.0              | 89.81           | 358.14      | 9,591.6               | 462.8        | -178.4       | 466.9                   | 8.97                    | 8.82                   | -1.63                 |
| 10,096.0              | 90.80           | 358.01      | 9,591.4               | 492.8        | -179.4       | 496.9                   | 3.33                    | 3.30                   | -0.43                 |
| 10,190.0              | 93.85           | 357.91      | 9,587.6               | 586.6        | -182.8       | 590.8                   | 3.25                    | 3.24                   | -0.11                 |
| 10,282.0              | 94.05           | 358.16      | 9,581.3               | 678.4        | -185.9       | 682.6                   | 0.35                    | 0.22                   | 0.27                  |
| 10,375.0              | 91.86           | 0.92        | 9,576.5               | 771.2        | -186.7       | 775.4                   | 3.79                    | -2.35                  | 2.97                  |
| 10,467.0              | 89.93           | 1.76        | 9,575.0               | 863.2        | -184.5       | 867.3                   | 2.29                    | -2.10                  | 0.91                  |
| 10,560.0              | 90.74           | 2.57        | 9,574.5               | 956.1        | -181.0       | 960.1                   | 1.23                    | 0.87                   | 0.87                  |
| 10,654.0              | 90.07           | 2.12        | 9,573.8               | 1,050.0      | -177.1       | 1,053.9                 | 0.86                    | -0.71                  | -0.48                 |
| 10,747.0              | 89.25           | 0.65        | 9,574.4               | 1,143.0      | -174.9       | 1,146.8                 | 1.81                    | -0.88                  | -1.58                 |
| 10,840.0              | 90.71           | 0.38        | 9,574.4               | 1,236.0      | -174.1       | 1,239.8                 | 1.60                    | 1.57                   | -0.29                 |
| 10,934.0              | 92.09           | 0.63        | 9,572.1               | 1,330.0      | -173.2       | 1,333.7                 | 1.49                    | 1.47                   | 0.27                  |
| 11,026.0              | 91.41           | 0.43        | 9,569.3               | 1,421.9      | -172.4       | 1,425.6                 | 0.77                    | -0.74                  | -0.22                 |
| 11,118.0              | 91.81           | 0.62        | 9,566.7               | 1,513.9      | -171.5       | 1,517.5                 | 0.48                    | 0.43                   | 0.21                  |
| 11,210.0              | 90.77           | 358.86      | 9,564.6               | 1,605.9      | -172.0       | 1,609.5                 | 2.22                    | -1.13                  | -1.91                 |
| 11,302.0              | 92.09           | 357.86      | 9,562.3               | 1,697.8      | -174.6       | 1,701.4                 | 1.80                    | 1.43                   | -1.09                 |
| 11,395.0              | 91.72           | 358.74      | 9,559.3               | 1,790.7      | -177.4       | 1,794.4                 | 1.03                    | -0.40                  | 0.95                  |
| 11,487.0              | 91.02           | 358.25      | 9,557.1               | 1,882.6      | -179.8       | 1,886.3                 | 0.93                    | -0.76                  | -0.53                 |
| 11,580.0              | 92.98           | 358.27      | 9,553.8               | 1,975.5      | -182.6       | 1,979.3                 | 2.11                    | 2.11                   | 0.02                  |
| 11,673.0              | 92.11           | 359.90      | 9,549.7               | 2,068.4      | -184.1       | 2,072.2                 | 1.99                    | -0.94                  | 1.75                  |
| 11,766.0              | 90.99           | 0.74        | 9,547.2               | 2,161.4      | -183.6       | 2,165.1                 | 1.51                    | -1.20                  | 0.90                  |
| 11,859.0              | 92.73           | 0.61        | 9,544.1               | 2,254.3      | -182.5       | 2,258.0                 | 1.88                    | 1.87                   | -0.14                 |
| 11,951.0              | 90.37           | 359.46      | 9,541.7               | 2,346.3      | -182.4       | 2,349.9                 | 2.85                    | -2.57                  | -1.25                 |
| 12,045.0              | 90.23           | 359.47      | 9,541.2               | 2,440.3      | -183.3       | 2,443.9                 | 0.15                    | -0.15                  | 0.01                  |
| 12,138.0              | 91.50           | 359.55      | 9,539.8               | 2,533.3      | -184.1       | 2,536.9                 | 1.37                    | 1.37                   | 0.09                  |
| 12,230.0              | 92.70           | 359.29      | 9,536.4               | 2,625.2      | -185.0       | 2,628.8                 | 1.33                    | 1.30                   | -0.28                 |
| 12,323.0              | 92.39           | 359.45      | 9,532.3               | 2,718.1      | -186.0       | 2,721.7                 | 0.38                    | -0.33                  | 0.17                  |
| 12,418.0              | 90.63           | 359.03      | 9,529.8               | 2,813.0      | -187.3       | 2,816.7                 | 1.90                    | -1.85                  | -0.44                 |
| 12,512.0              | 91.41           | 358.32      | 9,528.1               | 2,907.0      | -189.5       | 2,910.7                 | 1.12                    | 0.83                   | -0.76                 |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 12,606.0              | 92.87           | 358.18      | 9,524.6               | 3,000.9      | -192.3       | 3,004.6                 | 1.56                    | 1.55                   | -0.15                 |
| 12,698.0              | 91.72           | 359.85      | 9,520.9               | 3,092.8      | -193.9       | 3,096.5                 | 2.20                    | -1.25                  | 1.82                  |
| 12,790.0              | 89.31           | 0.98        | 9,520.1               | 3,184.8      | -193.2       | 3,188.5                 | 2.89                    | -2.62                  | 1.23                  |
| 12,884.0              | 91.19           | 2.06        | 9,519.7               | 3,278.7      | -190.7       | 3,282.3                 | 2.31                    | 2.00                   | 1.15                  |
| 12,977.0              | 91.38           | 4.47        | 9,517.6               | 3,371.6      | -185.5       | 3,375.0                 | 2.60                    | 0.20                   | 2.59                  |
| 13,071.0              | 90.26           | 3.16        | 9,516.2               | 3,465.3      | -179.2       | 3,468.6                 | 1.83                    | -1.19                  | -1.39                 |
| 13,163.0              | 89.90           | 1.61        | 9,516.1               | 3,557.3      | -175.4       | 3,560.4                 | 1.73                    | -0.39                  | -1.68                 |
| 13,257.0              | 91.30           | 1.74        | 9,515.1               | 3,651.2      | -172.6       | 3,654.3                 | 1.50                    | 1.49                   | 0.14                  |
| 13,350.0              | 90.94           | 1.18        | 9,513.3               | 3,744.2      | -170.3       | 3,747.1                 | 0.72                    | -0.39                  | -0.60                 |
| 13,395.0              | 90.74           | 0.79        | 9,512.6               | 3,789.2      | -169.5       | 3,792.1                 | 0.97                    | -0.44                  | -0.87                 |
| 13,488.0              | 91.41           | 359.86      | 9,510.9               | 3,882.1      | -169.0       | 3,885.0                 | 1.23                    | 0.72                   | -1.00                 |
| 13,581.0              | 89.59           | 358.26      | 9,510.1               | 3,975.1      | -170.5       | 3,978.0                 | 2.61                    | -1.96                  | -1.72                 |
| 13,674.0              | 90.63           | 358.72      | 9,509.9               | 4,068.1      | -172.9       | 4,071.0                 | 1.22                    | 1.12                   | 0.49                  |
| 13,766.0              | 89.73           | 358.44      | 9,509.6               | 4,160.0      | -175.2       | 4,163.0                 | 1.02                    | -0.98                  | -0.30                 |
| 13,859.0              | 89.48           | 357.64      | 9,510.3               | 4,253.0      | -178.4       | 4,256.0                 | 0.90                    | -0.27                  | -0.86                 |
| 13,952.0              | 90.15           | 357.70      | 9,510.6               | 4,345.9      | -182.2       | 4,349.0                 | 0.72                    | 0.72                   | 0.06                  |
| 14,045.0              | 90.43           | 357.65      | 9,510.1               | 4,438.8      | -185.9       | 4,442.0                 | 0.31                    | 0.30                   | -0.05                 |
| 14,137.0              | 91.47           | 357.32      | 9,508.6               | 4,530.7      | -190.0       | 4,533.9                 | 1.19                    | 1.13                   | -0.36                 |
| 14,231.0              | 91.22           | 359.04      | 9,506.3               | 4,624.7      | -193.0       | 4,627.9                 | 1.85                    | -0.27                  | 1.83                  |
| 14,326.0              | 91.50           | 358.96      | 9,504.1               | 4,719.6      | -194.6       | 4,722.9                 | 0.31                    | 0.29                   | -0.08                 |
| 14,419.0              | 90.91           | 358.13      | 9,502.1               | 4,812.6      | -197.0       | 4,815.9                 | 1.09                    | -0.63                  | -0.89                 |
| 14,512.0              | 91.05           | 357.20      | 9,500.5               | 4,905.5      | -200.8       | 4,908.8                 | 1.01                    | 0.15                   | -1.00                 |
| 14,605.0              | 90.43           | 357.10      | 9,499.3               | 4,998.3      | -205.4       | 5,001.8                 | 0.68                    | -0.67                  | -0.11                 |
| 14,698.0              | 89.59           | 356.57      | 9,499.3               | 5,091.2      | -210.5       | 5,094.7                 | 1.07                    | -0.90                  | -0.57                 |
| 14,791.0              | 91.08           | 358.17      | 9,498.8               | 5,184.1      | -214.8       | 5,187.7                 | 2.35                    | 1.60                   | 1.72                  |
| 14,884.0              | 92.42           | 358.26      | 9,495.9               | 5,277.0      | -217.7       | 5,280.7                 | 1.44                    | 1.44                   | 0.10                  |
| 14,975.0              | 91.30           | 357.91      | 9,493.0               | 5,367.9      | -220.7       | 5,371.6                 | 1.29                    | -1.23                  | -0.38                 |
| 15,070.0              | 89.51           | 358.73      | 9,492.3               | 5,462.9      | -223.5       | 5,466.6                 | 2.07                    | -1.88                  | 0.86                  |
| 15,164.0              | 88.30           | 358.48      | 9,494.1               | 5,556.8      | -225.8       | 5,560.6                 | 1.31                    | -1.29                  | -0.27                 |
| 15,258.0              | 89.03           | 358.17      | 9,496.3               | 5,650.7      | -228.6       | 5,654.6                 | 0.84                    | 0.78                   | -0.33                 |
| 15,351.0              | 89.65           | 357.95      | 9,497.4               | 5,743.7      | -231.7       | 5,747.5                 | 0.71                    | 0.67                   | -0.24                 |
| 15,446.0              | 90.07           | 0.13        | 9,497.6               | 5,838.7      | -233.3       | 5,842.5                 | 2.34                    | 0.44                   | 2.29                  |
| 15,538.0              | 90.52           | 0.45        | 9,497.1               | 5,930.7      | -232.8       | 5,934.5                 | 0.60                    | 0.49                   | 0.35                  |
| 15,630.0              | 90.85           | 0.90        | 9,496.0               | 6,022.7      | -231.7       | 6,026.4                 | 0.61                    | 0.36                   | 0.49                  |
| 15,723.0              | 91.25           | 0.74        | 9,494.3               | 6,115.6      | -230.4       | 6,119.4                 | 0.46                    | 0.43                   | -0.17                 |
| 15,817.0              | 92.35           | 0.40        | 9,491.4               | 6,209.6      | -229.5       | 6,213.3                 | 1.22                    | 1.17                   | -0.36                 |
| 15,909.0              | 91.67           | 2.60        | 9,488.2               | 6,301.5      | -227.1       | 6,305.1                 | 2.50                    | -0.74                  | 2.39                  |
| 16,002.0              | 89.66           | 1.41        | 9,487.1               | 6,394.4      | -223.8       | 6,397.9                 | 2.51                    | -2.16                  | -1.28                 |
| 16,094.0              | 89.82           | 0.64        | 9,487.5               | 6,486.4      | -222.2       | 6,489.8                 | 0.85                    | 0.17                   | -0.84                 |
| 16,188.0              | 89.35           | 359.73      | 9,488.2               | 6,580.4      | -221.9       | 6,583.8                 | 1.09                    | -0.50                  | -0.97                 |
| 16,281.0              | 90.41           | 359.33      | 9,488.4               | 6,673.4      | -222.6       | 6,676.8                 | 1.22                    | 1.14                   | -0.43                 |
| 16,374.0              | 91.65           | 358.84      | 9,486.7               | 6,766.4      | -224.1       | 6,769.8                 | 1.43                    | 1.33                   | -0.53                 |
| 16,467.0              | 87.75           | 358.60      | 9,487.2               | 6,859.3      | -226.2       | 6,862.7                 | 4.20                    | -4.19                  | -0.26                 |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Survey

| Measured Depth (usft)                          | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|------------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 16,559.0                                       | 87.64           | 358.79      | 9,490.9               | 6,951.2      | -228.3       | 6,954.7                 | 0.24                    | -0.12                  | 0.21                  |
| 16,652.0                                       | 87.50           | 358.18      | 9,494.8               | 7,044.1      | -230.7       | 7,047.6                 | 0.67                    | -0.15                  | -0.66                 |
| 16,745.0                                       | 89.04           | 358.94      | 9,497.6               | 7,137.0      | -233.1       | 7,140.5                 | 1.85                    | 1.66                   | 0.82                  |
| 16,837.0                                       | 89.60           | 358.74      | 9,498.7               | 7,229.0      | -234.9       | 7,232.5                 | 0.65                    | 0.61                   | -0.22                 |
| 16,931.0                                       | 90.55           | 358.64      | 9,498.6               | 7,323.0      | -237.1       | 7,326.5                 | 1.02                    | 1.01                   | -0.11                 |
| 17,036.0                                       | 91.56           | 358.64      | 9,496.7               | 7,427.9      | -239.6       | 7,431.5                 | 0.96                    | 0.96                   | 0.00                  |
| 17,128.0                                       | 90.85           | 0.15        | 9,494.7               | 7,519.9      | -240.6       | 7,523.5                 | 1.81                    | -0.77                  | 1.64                  |
| 17,223.0                                       | 91.39           | 0.16        | 9,492.9               | 7,614.9      | -240.3       | 7,618.4                 | 0.57                    | 0.57                   | 0.01                  |
| 17,316.0                                       | 89.26           | 2.34        | 9,492.4               | 7,707.8      | -238.3       | 7,711.3                 | 3.28                    | -2.29                  | 2.34                  |
| 17,409.0                                       | 90.83           | 3.00        | 9,492.3               | 7,800.7      | -233.9       | 7,804.1                 | 1.83                    | 1.69                   | 0.71                  |
| 17,504.0                                       | 88.36           | 2.35        | 9,492.9               | 7,895.6      | -229.5       | 7,898.8                 | 2.69                    | -2.60                  | -0.68                 |
| 17,596.0                                       | 87.60           | 1.57        | 9,496.2               | 7,987.5      | -226.4       | 7,990.6                 | 1.18                    | -0.83                  | -0.85                 |
| 17,691.0                                       | 89.17           | 1.82        | 9,498.9               | 8,082.4      | -223.5       | 8,085.4                 | 1.67                    | 1.65                   | 0.26                  |
| 17,784.0                                       | 88.39           | 0.69        | 9,500.8               | 8,175.4      | -221.5       | 8,178.3                 | 1.48                    | -0.84                  | -1.22                 |
| 17,876.0                                       | 88.61           | 359.93      | 9,503.3               | 8,267.3      | -221.0       | 8,270.3                 | 0.86                    | 0.24                   | -0.83                 |
| 17,970.0                                       | 89.54           | 0.00        | 9,504.8               | 8,361.3      | -221.1       | 8,364.2                 | 0.99                    | 0.99                   | 0.07                  |
| 18,064.0                                       | 89.93           | 0.20        | 9,505.2               | 8,455.3      | -220.9       | 8,458.2                 | 0.47                    | 0.41                   | 0.21                  |
| 18,157.0                                       | 91.02           | 0.28        | 9,504.4               | 8,548.3      | -220.5       | 8,551.2                 | 1.18                    | 1.17                   | 0.09                  |
| 18,249.0                                       | 91.22           | 0.29        | 9,502.6               | 8,640.3      | -220.1       | 8,643.1                 | 0.22                    | 0.22                   | 0.01                  |
| 18,342.0                                       | 91.81           | 0.25        | 9,500.2               | 8,733.3      | -219.6       | 8,736.0                 | 0.64                    | 0.63                   | -0.04                 |
| 18,435.0                                       | 92.56           | 0.21        | 9,496.6               | 8,826.2      | -219.2       | 8,828.9                 | 0.81                    | 0.81                   | -0.04                 |
| 18,528.0                                       | 93.91           | 359.91      | 9,491.4               | 8,919.1      | -219.2       | 8,921.7                 | 1.49                    | 1.45                   | -0.32                 |
| 18,620.0                                       | 91.47           | 359.46      | 9,487.1               | 9,010.9      | -219.7       | 9,013.6                 | 2.70                    | -2.65                  | -0.49                 |
| 18,715.0                                       | 91.05           | 359.19      | 9,485.0               | 9,105.9      | -220.8       | 9,108.6                 | 0.53                    | -0.44                  | -0.28                 |
| 18,808.0                                       | 92.00           | 358.99      | 9,482.5               | 9,198.9      | -222.3       | 9,201.6                 | 1.04                    | 1.02                   | -0.22                 |
| 18,902.0                                       | 92.98           | 358.59      | 9,478.4               | 9,292.8      | -224.2       | 9,295.5                 | 1.13                    | 1.04                   | -0.43                 |
| 18,995.0                                       | 91.75           | 359.62      | 9,474.6               | 9,385.7      | -225.7       | 9,388.4                 | 1.72                    | -1.32                  | 1.11                  |
| 19,089.0                                       | 91.08           | 359.33      | 9,472.3               | 9,479.6      | -226.5       | 9,482.3                 | 0.78                    | -0.71                  | -0.31                 |
| 19,181.0                                       | 90.15           | 359.82      | 9,471.3               | 9,571.6      | -227.2       | 9,574.3                 | 1.14                    | -1.01                  | 0.53                  |
| 19,275.0                                       | 90.12           | 359.39      | 9,471.1               | 9,665.6      | -227.9       | 9,668.3                 | 0.46                    | -0.03                  | -0.46                 |
| 19,368.0                                       | 89.06           | 0.16        | 9,471.7               | 9,758.6      | -228.2       | 9,761.3                 | 1.41                    | -1.14                  | 0.83                  |
| 19,462.0                                       | 88.53           | 359.82      | 9,473.7               | 9,852.6      | -228.3       | 9,855.2                 | 0.67                    | -0.56                  | -0.36                 |
| 19,554.0                                       | 89.59           | 0.28        | 9,475.2               | 9,944.6      | -228.2       | 9,947.2                 | 1.26                    | 1.15                   | 0.50                  |
| 19,647.0                                       | 89.28           | 359.89      | 9,476.1               | 10,037.6     | -228.0       | 10,040.2                | 0.54                    | -0.33                  | -0.42                 |
| 19,741.0                                       | 89.84           | 359.85      | 9,476.8               | 10,131.6     | -228.3       | 10,134.1                | 0.60                    | 0.60                   | -0.04                 |
| 19,808.0                                       | 90.01           | 359.57      | 9,476.9               | 10,198.6     | -228.6       | 10,201.1                | 0.49                    | 0.25                   | -0.42                 |
| <b>Final MWD SVY @ 19808'MD</b>                |                 |             |                       |              |              |                         |                         |                        |                       |
| 19,821.9                                       | 90.01           | 359.57      | 9,476.9               | 10,212.5     | -228.7       | 10,215.0                | 0.00                    | 0.00                   | 0.00                  |
| <b>LTP @ 19821.9'MD, 100'FSL &amp; 551'FWL</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 19,872.0                                       | 90.01           | 359.57      | 9,476.9               | 10,262.6     | -229.1       | 10,265.1                | 0.00                    | 0.00                   | 0.00                  |
| <b>PTD @ 19872'MD</b>                          |                 |             |                       |              |              |                         |                         |                        |                       |

## Survey Report

|                  |                         |                                     |                                     |
|------------------|-------------------------|-------------------------------------|-------------------------------------|
| <b>Company:</b>  | NORTHERN DELAWARE BASIN | <b>Local Co-ordinate Reference:</b> | Well HARRIER FED COM #305H          |
| <b>Project:</b>  | LEA COUNTY, NM          | <b>TVD Reference:</b>               | KB=31' @ 3278.6usft (Precision 106) |
| <b>Site:</b>     | BULLDOG                 | <b>MD Reference:</b>                | KB=31' @ 3278.6usft (Precision 106) |
| <b>Well:</b>     | HARRIER FED COM #305H   | <b>North Reference:</b>             | Grid                                |
| <b>Wellbore:</b> | OWB                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                   |
| <b>Design:</b>   | AWP                     | <b>Database:</b>                    | EDM_Users                           |

### Design Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                             |
|-----------------------------|-----------------------------|-------------------|-----------------|-------------------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                                     |
| 19,808.0                    | 9,476.9                     | 10,198.6          | -228.6          | Final MWD SVY @ 19808'MD            |
| 19,821.9                    | 9,476.9                     | 10,212.5          | -228.7          | LTP @ 19821.9'MD, 100'FSL & 551'FWL |
| 19,872.0                    | 9,476.9                     | 10,262.6          | -229.1          | PTD @ 19872'MD                      |

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_