



CONCHO

## **NORTHERN DELAWARE BASIN**

**LEA COUNTY, NM**

**BULLDOG**

**DOMINATOR 25 FED #605H**

**OWB**

**Design: ACTUAL WELLPATH**

## **Standard Survey Report**

**10 September, 2018**

**HOBBS OCD**

**MAY 22 2019**

**RECEIVED**



## Survey Report

**Company:** NORTHERN DELAWARE BASIN  
**Project:** LEA COUNTY, NM  
**Site:** BULLDOG  
**Well:** DOMINATOR 25 FED #605H  
**Wellbore:** OWB  
**Design:** ACTUAL WELLPATH

**Local Co-ordinate Reference:** Well DOMINATOR 25 FED #605H  
**TVD Reference:** RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
**MD Reference:** RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** 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>Latitude:</b>         | 32° 5' 36.820 N  |
| <b>From:</b>                 | Map      | <b>Easting:</b>     | 741,887.40 usft | <b>Longitude:</b>        | 103° 33' 8.116 W |
| <b>Position Uncertainty:</b> | 0.0 usft | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> | 0.42 °           |

|                             |                        |                            |                  |                      |                                     |
|-----------------------------|------------------------|----------------------------|------------------|----------------------|-------------------------------------|
| <b>Well</b>                 | DOMINATOR 25 FED #605H |                            |                  |                      |                                     |
| <b>Well Position</b>        | +N/-S                  | 0.0 usft                   | <b>Northing:</b> | 399,191.10 usft      | <b>Latitude:</b> 32° 5' 41.649 N    |
|                             | +E/-W                  | 0.0 usft                   | <b>Easting:</b>  | 750,833.70 usft      | <b>Longitude:</b> 103° 31' 24.078 W |
| <b>Position Uncertainty</b> | 3.0 usft               | <b>Wellhead Elevation:</b> | usft             | <b>Ground Level:</b> | 3,340.1 usft                        |

|                  |                   |                    |                    |                  |                       |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|
| <b>Wellbore</b>  | OWB               |                    |                    |                  |                       |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |
|                  | WMM2015           | 1/30/2018          | (°)                | (°)              | (nT)                  |
|                  |                   |                    | 6.88               | 59.93            | 47,789.91544525       |

|                          |                         |               |              |                      |     |
|--------------------------|-------------------------|---------------|--------------|----------------------|-----|
| <b>Design</b>            | ACTUAL WELLPATH         |               |              |                      |     |
| <b>Audit Notes:</b>      |                         |               |              |                      |     |
| <b>Version:</b>          | 1.0                     | <b>Phase:</b> | ACTUAL       | <b>Tie On Depth:</b> | 0.0 |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b> | <b>+N/-S</b>  | <b>+E/-W</b> | <b>Direction</b>     |     |
|                          | (usft)                  | (usft)        | (usft)       | (°)                  |     |
|                          | 0.0                     | 0.0           | 0.0          | 356.84               |     |

|                       |               |                           |                     |                                             |  |
|-----------------------|---------------|---------------------------|---------------------|---------------------------------------------|--|
| <b>Survey Program</b> | Date 9/4/2018 |                           |                     |                                             |  |
| <b>From</b>           | <b>To</b>     | <b>Survey (Wellbore)</b>  | <b>Tool Name</b>    | <b>Description</b>                          |  |
| (usft)                | (usft)        |                           |                     |                                             |  |
| 100.0                 | 11,635.0      | GYRO - INTERMEDIATE (OWB) | Standard Keeper 104 | Standard Wireline Keeper ver 1.0.4          |  |
| 11,780.0              | 16,956.0      | MWD-CURVE/LATERAL (OWB)   | MWD+IFR1+MS         | OWSG MWD + IFR 1 + Multi-Station Correction |  |

|                 |                    |                |                 |               |               |                 |                    |                    |                    |
|-----------------|--------------------|----------------|-----------------|---------------|---------------|-----------------|--------------------|--------------------|--------------------|
| <b>Survey</b>   |                    |                |                 |               |               |                 |                    |                    |                    |
| <b>Measured</b> | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical</b> | <b>+N/-S</b>  | <b>+E/-W</b>  | <b>Vertical</b> | <b>Dogleg</b>      | <b>Build</b>       | <b>Turn</b>        |
| <b>Depth</b>    | <b>(°)</b>         | <b>(°)</b>     | <b>Depth</b>    | <b>(usft)</b> | <b>(usft)</b> | <b>Section</b>  | <b>Rate</b>        | <b>Rate</b>        | <b>Rate</b>        |
| <b>(usft)</b>   |                    |                | <b>(usft)</b>   |               |               | <b>(usft)</b>   | <b>(°/100usft)</b> | <b>(°/100usft)</b> | <b>(°/100usft)</b> |
| 0.0             | 0.00               | 0.00           | 0.0             | 0.0           | 0.0           | 0.0             | 0.00               | 0.00               | 0.00               |
| 100.0           | 0.41               | 231.86         | 100.0           | -0.2          | -0.3          | -0.2            | 0.41               | 0.41               | 0.00               |
| 125.0           | 0.33               | 224.79         | 125.0           | -0.3          | -0.4          | -0.3            | 0.37               | -0.32              | -28.28             |
| 150.0           | 0.31               | 237.76         | 150.0           | -0.4          | -0.5          | -0.4            | 0.30               | -0.08              | 51.88              |
| 175.0           | 0.34               | 239.53         | 175.0           | -0.5          | -0.6          | -0.5            | 0.13               | 0.12               | 7.08               |
| 200.0           | 0.41               | 249.76         | 200.0           | -0.6          | -0.8          | -0.5            | 0.39               | 0.28               | 40.92              |
| 225.0           | 0.60               | 251.03         | 225.0           | -0.6          | -1.0          | -0.6            | 0.76               | 0.76               | 5.08               |
| 250.0           | 0.62               | 235.70         | 250.0           | -0.7          | -1.2          | -0.7            | 0.66               | 0.08               | -61.32             |



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 Wellbore: OWB  
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 TVD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
 MD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 275.0                 | 0.55            | 228.51      | 275.0                 | -0.9         | -1.4         | -0.8                    | 0.41                    | -0.28                  | -28.76                |
| 300.0                 | 0.45            | 221.12      | 300.0                 | -1.1         | -1.6         | -1.0                    | 0.48                    | -0.40                  | -29.56                |
| 325.0                 | 0.45            | 236.14      | 325.0                 | -1.2         | -1.7         | -1.1                    | 0.47                    | 0.00                   | 60.08                 |
| 350.0                 | 0.47            | 238.59      | 350.0                 | -1.3         | -1.9         | -1.2                    | 0.11                    | 0.08                   | 9.80                  |
| 375.0                 | 0.65            | 234.96      | 375.0                 | -1.4         | -2.1         | -1.3                    | 0.73                    | 0.72                   | -14.52                |
| 400.0                 | 0.57            | 221.14      | 400.0                 | -1.6         | -2.3         | -1.5                    | 0.67                    | -0.32                  | -55.28                |
| 425.0                 | 0.48            | 220.24      | 425.0                 | -1.8         | -2.4         | -1.6                    | 0.36                    | -0.36                  | -3.60                 |
| 450.0                 | 0.46            | 217.67      | 450.0                 | -1.9         | -2.6         | -1.8                    | 0.12                    | -0.08                  | -10.28                |
| 475.0                 | 0.46            | 230.95      | 475.0                 | -2.1         | -2.7         | -1.9                    | 0.43                    | 0.00                   | 53.12                 |
| 500.0                 | 0.61            | 219.60      | 500.0                 | -2.2         | -2.9         | -2.1                    | 0.73                    | 0.60                   | -45.40                |
| 525.0                 | 0.68            | 212.68      | 525.0                 | -2.5         | -3.0         | -2.3                    | 0.42                    | 0.28                   | -27.68                |
| 550.0                 | 0.64            | 203.66      | 550.0                 | -2.7         | -3.2         | -2.5                    | 0.44                    | -0.16                  | -36.08                |
| 575.0                 | 0.63            | 191.38      | 575.0                 | -3.0         | -3.3         | -2.8                    | 0.54                    | -0.04                  | -49.12                |
| 600.0                 | 0.50            | 199.65      | 600.0                 | -3.2         | -3.3         | -3.0                    | 0.61                    | -0.52                  | 33.08                 |
| 625.0                 | 0.58            | 195.57      | 625.0                 | -3.5         | -3.4         | -3.3                    | 0.35                    | 0.32                   | -16.32                |
| 650.0                 | 0.65            | 192.75      | 650.0                 | -3.7         | -3.5         | -3.5                    | 0.30                    | 0.28                   | -11.28                |
| 675.0                 | 0.70            | 180.08      | 675.0                 | -4.0         | -3.5         | -3.8                    | 0.63                    | 0.20                   | -50.68                |
| 700.0                 | 0.90            | 179.16      | 700.0                 | -4.4         | -3.5         | -4.2                    | 0.80                    | 0.80                   | -3.68                 |
| 725.0                 | 0.80            | 172.73      | 725.0                 | -4.7         | -3.5         | -4.5                    | 0.55                    | -0.40                  | -25.72                |
| 750.0                 | 0.65            | 166.66      | 750.0                 | -5.0         | -3.4         | -4.8                    | 0.67                    | -0.60                  | -24.28                |
| 775.0                 | 0.75            | 179.72      | 775.0                 | -5.3         | -3.4         | -5.1                    | 0.75                    | 0.40                   | 52.24                 |
| 800.0                 | 0.88            | 167.28      | 800.0                 | -5.7         | -3.3         | -5.5                    | 0.88                    | 0.52                   | -49.76                |
| 825.0                 | 1.03            | 161.58      | 825.0                 | -6.1         | -3.2         | -5.9                    | 0.71                    | 0.60                   | -22.80                |
| 850.0                 | 0.93            | 156.99      | 850.0                 | -6.5         | -3.1         | -6.3                    | 0.51                    | -0.40                  | -18.36                |
| 875.0                 | 0.95            | 152.94      | 875.0                 | -6.9         | -2.9         | -6.7                    | 0.28                    | 0.08                   | -16.20                |
| 900.0                 | 0.81            | 160.45      | 899.9                 | -7.2         | -2.7         | -7.0                    | 0.72                    | -0.56                  | 30.04                 |
| 925.0                 | 0.86            | 165.31      | 924.9                 | -7.6         | -2.6         | -7.4                    | 0.35                    | 0.20                   | 19.44                 |
| 950.0                 | 0.67            | 155.79      | 949.9                 | -7.9         | -2.5         | -7.7                    | 0.91                    | -0.76                  | -38.08                |
| 975.0                 | 0.65            | 148.67      | 974.9                 | -8.1         | -2.4         | -8.0                    | 0.34                    | -0.08                  | -28.48                |
| 1,000.0               | 0.40            | 139.88      | 999.9                 | -8.3         | -2.3         | -8.2                    | 1.05                    | -1.00                  | -35.16                |
| 1,025.0               | 0.28            | 169.75      | 1,024.9               | -8.4         | -2.2         | -8.3                    | 0.84                    | -0.48                  | 119.48                |
| 1,050.0               | 0.40            | 164.35      | 1,049.9               | -8.6         | -2.2         | -8.5                    | 0.50                    | 0.48                   | -21.60                |
| 1,075.0               | 0.26            | 127.16      | 1,074.9               | -8.7         | -2.1         | -8.6                    | 1.00                    | -0.56                  | -148.76               |
| 1,100.0               | 0.20            | 80.79       | 1,099.9               | -8.7         | -2.0         | -8.6                    | 0.76                    | -0.24                  | -185.48               |
| 1,125.0               | 0.05            | 88.77       | 1,124.9               | -8.7         | -2.0         | -8.6                    | 0.60                    | -0.60                  | 31.92                 |
| 1,150.0               | 0.17            | 147.72      | 1,149.9               | -8.8         | -1.9         | -8.6                    | 0.60                    | 0.48                   | 235.80                |
| 1,175.0               | 0.21            | 108.53      | 1,174.9               | -8.8         | -1.9         | -8.7                    | 0.53                    | 0.16                   | -156.76               |
| 1,200.0               | 0.21            | 73.39       | 1,199.9               | -8.8         | -1.8         | -8.7                    | 0.51                    | 0.00                   | -140.56               |
| 1,225.0               | 0.10            | 59.92       | 1,224.9               | -8.8         | -1.7         | -8.7                    | 0.46                    | -0.44                  | -53.88                |
| 1,250.0               | 0.13            | 135.96      | 1,249.9               | -8.8         | -1.7         | -8.7                    | 0.57                    | 0.12                   | 304.16                |
| 1,275.0               | 0.28            | 118.54      | 1,274.9               | -8.8         | -1.6         | -8.7                    | 0.64                    | 0.60                   | -69.68                |
| 1,300.0               | 0.32            | 80.81       | 1,299.9               | -8.9         | -1.5         | -8.8                    | 0.79                    | 0.16                   | -150.92               |



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## 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 1,325.0               | 0.23            | 44.70       | 1,324.9               | -8.8         | -1.4         | -8.7                    | 0.76                    | -0.36                  | -144.44               |
| 1,350.0               | 0.12            | 76.50       | 1,349.9               | -8.8         | -1.3         | -8.7                    | 0.57                    | -0.44                  | 127.20                |
| 1,375.0               | 0.30            | 111.57      | 1,374.9               | -8.8         | -1.2         | -8.7                    | 0.85                    | 0.72                   | 140.28                |
| 1,400.0               | 0.28            | 74.46       | 1,399.9               | -8.8         | -1.1         | -8.7                    | 0.74                    | -0.08                  | -148.44               |
| 1,425.0               | 0.32            | 33.91       | 1,424.9               | -8.7         | -1.0         | -8.6                    | 0.85                    | 0.16                   | -162.20               |
| 1,450.0               | 0.10            | 62.31       | 1,449.9               | -8.6         | -0.9         | -8.6                    | 0.95                    | -0.88                  | 113.60                |
| 1,475.0               | 0.09            | 73.61       | 1,474.9               | -8.6         | -0.9         | -8.6                    | 0.08                    | -0.04                  | 45.20                 |
| 1,500.0               | 0.26            | 53.98       | 1,499.9               | -8.6         | -0.8         | -8.5                    | 0.71                    | 0.68                   | -78.52                |
| 1,525.0               | 0.72            | 329.93      | 1,524.9               | -8.4         | -0.9         | -8.4                    | 2.96                    | 1.84                   | -336.20               |
| 1,550.0               | 1.21            | 315.71      | 1,549.9               | -8.1         | -1.1         | -8.0                    | 2.17                    | 1.96                   | -56.88                |
| 1,575.0               | 1.12            | 315.18      | 1,574.9               | -7.7         | -1.5         | -7.6                    | 0.36                    | -0.36                  | -2.12                 |
| 1,600.0               | 1.68            | 300.99      | 1,599.9               | -7.4         | -2.0         | -7.3                    | 2.62                    | 2.24                   | -56.76                |
| 1,625.0               | 2.31            | 303.79      | 1,624.9               | -6.9         | -2.7         | -6.7                    | 2.55                    | 2.52                   | 11.20                 |
| 1,650.0               | 2.67            | 302.62      | 1,649.9               | -6.3         | -3.6         | -6.1                    | 1.45                    | 1.44                   | -4.68                 |
| 1,675.0               | 2.86            | 300.30      | 1,674.9               | -5.7         | -4.7         | -5.4                    | 0.88                    | 0.76                   | -9.28                 |
| 1,700.0               | 2.86            | 302.56      | 1,699.8               | -5.0         | -5.7         | -4.7                    | 0.45                    | 0.00                   | 9.04                  |
| 1,725.0               | 2.82            | 299.63      | 1,724.8               | -4.4         | -6.8         | -4.0                    | 0.60                    | -0.16                  | -11.72                |
| 1,750.0               | 3.01            | 296.73      | 1,749.8               | -3.8         | -7.9         | -3.4                    | 0.96                    | 0.76                   | -11.60                |
| 1,775.0               | 3.42            | 292.49      | 1,774.7               | -3.2         | -9.2         | -2.7                    | 1.89                    | 1.64                   | -16.96                |
| 1,800.0               | 4.30            | 289.10      | 1,799.7               | -2.6         | -10.7        | -2.0                    | 3.63                    | 3.52                   | -13.56                |
| 1,825.0               | 4.62            | 288.00      | 1,824.6               | -2.0         | -12.6        | -1.3                    | 1.32                    | 1.28                   | -4.40                 |
| 1,850.0               | 4.62            | 285.37      | 1,849.5               | -1.4         | -14.5        | -0.8                    | 0.85                    | 0.00                   | -10.52                |
| 1,875.0               | 4.55            | 286.34      | 1,874.4               | -0.9         | -16.4        | 0.0                     | 0.42                    | -0.28                  | 3.88                  |
| 1,900.0               | 4.60            | 286.12      | 1,899.3               | -0.3         | -18.4        | 0.7                     | 0.21                    | 0.20                   | -0.88                 |
| 1,925.0               | 4.66            | 286.01      | 1,924.3               | 0.2          | -20.3        | 1.4                     | 0.24                    | 0.24                   | -0.44                 |
| 1,950.0               | 4.60            | 285.31      | 1,949.2               | 0.8          | -22.2        | 2.0                     | 0.33                    | -0.24                  | -2.80                 |
| 1,975.0               | 5.32            | 284.66      | 1,974.1               | 1.3          | -24.3        | 2.7                     | 2.89                    | 2.88                   | -2.52                 |
| 2,000.0               | 4.70            | 284.67      | 1,999.0               | 1.9          | -26.4        | 3.3                     | 2.48                    | -2.48                  | -0.04                 |
| 2,025.0               | 4.71            | 283.92      | 2,023.9               | 2.4          | -28.4        | 4.0                     | 0.25                    | 0.04                   | -3.00                 |
| 2,050.0               | 4.53            | 284.26      | 2,048.8               | 2.9          | -30.4        | 4.6                     | 0.73                    | -0.72                  | 1.36                  |
| 2,075.0               | 4.71            | 282.07      | 2,073.7               | 3.3          | -32.3        | 5.1                     | 1.01                    | 0.72                   | -8.76                 |
| 2,100.0               | 4.68            | 283.08      | 2,098.7               | 3.8          | -34.3        | 5.7                     | 0.35                    | -0.12                  | 4.04                  |
| 2,125.0               | 4.61            | 282.39      | 2,123.6               | 4.2          | -36.3        | 6.2                     | 0.36                    | -0.28                  | -2.76                 |
| 2,150.0               | 5.07            | 284.51      | 2,148.5               | 4.7          | -38.4        | 6.8                     | 1.97                    | 1.84                   | 8.48                  |
| 2,175.0               | 4.44            | 280.38      | 2,173.4               | 5.2          | -40.4        | 7.4                     | 2.87                    | -2.52                  | -16.52                |
| 2,200.0               | 4.68            | 280.72      | 2,198.3               | 5.5          | -42.3        | 7.9                     | 0.97                    | 0.96                   | 1.36                  |
| 2,225.0               | 4.67            | 281.15      | 2,223.2               | 5.9          | -44.3        | 8.4                     | 0.15                    | -0.04                  | 1.72                  |
| 2,250.0               | 5.25            | 282.20      | 2,248.1               | 6.4          | -46.5        | 8.9                     | 2.35                    | 2.32                   | 4.20                  |
| 2,275.0               | 4.49            | 282.28      | 2,273.1               | 6.8          | -48.5        | 9.5                     | 3.04                    | -3.04                  | 0.32                  |
| 2,300.0               | 4.34            | 281.61      | 2,298.0               | 7.2          | -50.4        | 10.0                    | 0.63                    | -0.60                  | -2.68                 |
| 2,325.0               | 4.00            | 287.13      | 2,322.9               | 7.7          | -52.2        | 10.5                    | 2.10                    | -1.36                  | 22.08                 |
| 2,350.0               | 3.58            | 288.86      | 2,347.9               | 8.2          | -53.7        | 11.1                    | 1.74                    | -1.68                  | 6.92                  |



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## 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 2,375.0               | 3.66            | 290.37      | 2,372.8               | 8.7          | -55.2        | 11.7                    | 0.50                    | 0.32                   | 6.04                  |
| 2,400.0               | 3.65            | 289.79      | 2,397.8               | 9.3          | -56.7        | 12.4                    | 0.15                    | -0.04                  | -2.32                 |
| 2,425.0               | 3.55            | 290.76      | 2,422.7               | 9.8          | -58.2        | 13.0                    | 0.47                    | -0.40                  | 3.88                  |
| 2,450.0               | 3.41            | 292.18      | 2,447.7               | 10.4         | -59.6        | 13.6                    | 0.66                    | -0.56                  | 5.68                  |
| 2,475.0               | 3.49            | 290.79      | 2,472.6               | 10.9         | -61.0        | 14.3                    | 0.46                    | 0.32                   | -5.56                 |
| 2,500.0               | 3.52            | 291.42      | 2,497.6               | 11.5         | -62.4        | 14.9                    | 0.20                    | 0.12                   | 2.52                  |
| 2,525.0               | 3.43            | 291.20      | 2,522.5               | 12.0         | -63.8        | 15.5                    | 0.36                    | -0.36                  | -0.88                 |
| 2,550.0               | 3.57            | 291.84      | 2,547.5               | 12.6         | -65.3        | 16.1                    | 0.58                    | 0.56                   | 2.56                  |
| 2,575.0               | 3.68            | 294.39      | 2,572.4               | 13.2         | -66.7        | 16.8                    | 0.78                    | 0.44                   | 10.20                 |
| 2,600.0               | 3.76            | 295.64      | 2,597.4               | 13.9         | -68.2        | 17.6                    | 0.46                    | 0.32                   | 5.00                  |
| 2,625.0               | 3.84            | 296.45      | 2,622.3               | 14.6         | -69.7        | 18.4                    | 0.39                    | 0.32                   | 3.24                  |
| 2,650.0               | 3.94            | 296.48      | 2,647.3               | 15.4         | -71.2        | 19.3                    | 0.40                    | 0.40                   | 0.12                  |
| 2,675.0               | 4.04            | 295.67      | 2,672.2               | 16.1         | -72.8        | 20.1                    | 0.46                    | 0.40                   | -3.24                 |
| 2,700.0               | 4.01            | 295.56      | 2,697.1               | 16.9         | -74.3        | 21.0                    | 0.12                    | -0.12                  | -0.44                 |
| 2,725.0               | 3.93            | 296.72      | 2,722.1               | 17.6         | -75.9        | 21.8                    | 0.45                    | -0.32                  | 4.64                  |
| 2,750.0               | 3.87            | 296.49      | 2,747.0               | 18.4         | -77.4        | 22.6                    | 0.25                    | -0.24                  | -0.92                 |
| 2,775.0               | 3.95            | 296.31      | 2,772.0               | 19.2         | -78.9        | 23.5                    | 0.32                    | 0.32                   | -0.72                 |
| 2,800.0               | 3.94            | 296.77      | 2,796.9               | 19.9         | -80.5        | 24.3                    | 0.13                    | -0.04                  | 1.84                  |
| 2,825.0               | 3.98            | 295.78      | 2,821.9               | 20.7         | -82.0        | 25.2                    | 0.32                    | 0.16                   | -3.96                 |
| 2,850.0               | 4.08            | 291.41      | 2,846.8               | 21.4         | -83.6        | 26.0                    | 1.29                    | 0.40                   | -17.48                |
| 2,875.0               | 4.24            | 287.30      | 2,871.7               | 22.0         | -85.4        | 26.7                    | 1.35                    | 0.64                   | -16.44                |
| 2,900.0               | 4.18            | 286.21      | 2,896.7               | 22.5         | -87.1        | 27.3                    | 0.40                    | -0.24                  | -4.36                 |
| 2,925.0               | 4.19            | 285.61      | 2,921.6               | 23.0         | -88.9        | 27.9                    | 0.18                    | 0.04                   | -2.40                 |
| 2,950.0               | 4.19            | 286.85      | 2,946.5               | 23.5         | -90.6        | 28.5                    | 0.36                    | 0.00                   | 4.96                  |
| 2,975.0               | 4.20            | 285.65      | 2,971.5               | 24.0         | -92.4        | 29.1                    | 0.35                    | 0.04                   | -4.80                 |
| 3,000.0               | 4.38            | 285.05      | 2,996.4               | 24.5         | -94.2        | 29.7                    | 0.74                    | 0.72                   | -2.40                 |
| 3,025.0               | 3.98            | 284.04      | 3,021.3               | 25.0         | -95.9        | 30.3                    | 1.63                    | -1.60                  | -4.04                 |
| 3,050.0               | 4.11            | 283.06      | 3,046.3               | 25.4         | -97.7        | 30.8                    | 0.59                    | 0.52                   | -3.92                 |
| 3,075.0               | 4.01            | 283.70      | 3,071.2               | 25.8         | -99.4        | 31.3                    | 0.44                    | -0.40                  | 2.56                  |
| 3,100.0               | 3.98            | 283.10      | 3,096.1               | 26.2         | -101.1       | 31.8                    | 0.21                    | -0.12                  | -2.40                 |
| 3,125.0               | 3.84            | 283.06      | 3,121.1               | 26.6         | -102.7       | 32.2                    | 0.56                    | -0.56                  | -0.16                 |
| 3,150.0               | 3.81            | 282.04      | 3,146.0               | 27.0         | -104.4       | 32.7                    | 0.30                    | -0.12                  | -4.08                 |
| 3,175.0               | 3.69            | 282.28      | 3,171.0               | 27.3         | -106.0       | 33.1                    | 0.48                    | -0.48                  | 0.96                  |
| 3,200.0               | 3.70            | 282.07      | 3,195.9               | 27.7         | -107.5       | 33.5                    | 0.07                    | 0.04                   | -0.84                 |
| 3,225.0               | 3.70            | 281.56      | 3,220.9               | 28.0         | -109.1       | 34.0                    | 0.13                    | 0.00                   | -2.04                 |
| 3,250.0               | 3.64            | 279.98      | 3,245.8               | 28.3         | -110.7       | 34.3                    | 0.47                    | -0.24                  | -6.32                 |
| 3,275.0               | 3.58            | 281.72      | 3,270.8               | 28.6         | -112.2       | 34.7                    | 0.50                    | -0.24                  | 6.96                  |
| 3,300.0               | 3.37            | 279.93      | 3,295.7               | 28.9         | -113.7       | 35.1                    | 0.95                    | -0.84                  | -7.16                 |
| 3,325.0               | 3.26            | 280.61      | 3,320.7               | 29.1         | -115.1       | 35.4                    | 0.47                    | -0.44                  | 2.72                  |
| 3,350.0               | 3.21            | 281.35      | 3,345.6               | 29.4         | -116.5       | 35.8                    | 0.26                    | -0.20                  | 2.96                  |
| 3,375.0               | 3.19            | 280.93      | 3,370.6               | 29.7         | -117.9       | 36.1                    | 0.12                    | -0.08                  | -1.68                 |
| 3,400.0               | 3.32            | 281.95      | 3,395.6               | 29.9         | -119.3       | 36.5                    | 0.57                    | 0.52                   | 4.08                  |



# Survey Report

Company: NORTHERN DELAWARE BASIN  
 Project: LEA COUNTY, NM  
 Site: BULLDOG  
 Well: DOMINATOR 25 FED #605H  
 Wellbore: OWB  
 Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well DOMINATOR 25 FED #605H  
 TVD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
 MD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM\_Users

| 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 3,425.0               | 3.66            | 280.27      | 3,420.5               | 30.2         | -120.8       | 36.9                    | 1.42                    | 1.36                   | -6.72                 |
| 3,450.0               | 3.66            | 281.23      | 3,445.5               | 30.5         | -122.3       | 37.2                    | 0.25                    | 0.00                   | 3.84                  |
| 3,475.0               | 3.78            | 280.49      | 3,470.4               | 30.8         | -123.9       | 37.6                    | 0.52                    | 0.48                   | -2.96                 |
| 3,500.0               | 3.95            | 279.27      | 3,495.3               | 31.1         | -125.6       | 38.0                    | 0.76                    | 0.68                   | -4.88                 |
| 3,525.0               | 3.84            | 280.57      | 3,520.3               | 31.4         | -127.3       | 38.4                    | 0.56                    | -0.44                  | 5.20                  |
| 3,550.0               | 3.78            | 278.15      | 3,545.2               | 31.7         | -128.9       | 38.8                    | 0.69                    | -0.24                  | -9.68                 |
| 3,575.0               | 3.77            | 276.58      | 3,570.2               | 31.9         | -130.5       | 39.1                    | 0.42                    | -0.04                  | -6.28                 |
| 3,600.0               | 3.76            | 274.25      | 3,595.1               | 32.1         | -132.2       | 39.3                    | 0.61                    | -0.04                  | -9.32                 |
| 3,625.0               | 3.77            | 275.58      | 3,620.1               | 32.2         | -133.8       | 39.5                    | 0.35                    | 0.04                   | 5.32                  |
| 3,650.0               | 3.73            | 274.06      | 3,645.0               | 32.3         | -135.4       | 39.8                    | 0.43                    | -0.16                  | -6.08                 |
| 3,675.0               | 3.69            | 273.23      | 3,670.0               | 32.4         | -137.1       | 39.9                    | 0.27                    | -0.16                  | -3.32                 |
| 3,700.0               | 3.70            | 271.86      | 3,694.9               | 32.5         | -138.7       | 40.1                    | 0.36                    | 0.04                   | -5.48                 |
| 3,725.0               | 3.62            | 269.93      | 3,719.9               | 32.5         | -140.3       | 40.2                    | 0.59                    | -0.32                  | -7.72                 |
| 3,750.0               | 3.60            | 268.37      | 3,744.8               | 32.5         | -141.8       | 40.3                    | 0.40                    | -0.08                  | -6.24                 |
| 3,775.0               | 3.61            | 266.90      | 3,769.8               | 32.4         | -143.4       | 40.3                    | 0.37                    | 0.04                   | -5.88                 |
| 3,800.0               | 3.53            | 267.13      | 3,794.7               | 32.4         | -145.0       | 40.3                    | 0.33                    | -0.32                  | 0.92                  |
| 3,825.0               | 3.59            | 264.43      | 3,819.7               | 32.3         | -146.5       | 40.3                    | 0.71                    | 0.24                   | -10.80                |
| 3,850.0               | 3.64            | 263.31      | 3,844.6               | 32.1         | -148.1       | 40.2                    | 0.35                    | 0.20                   | -4.48                 |
| 3,875.0               | 3.68            | 264.05      | 3,869.6               | 31.9         | -149.7       | 40.1                    | 0.25                    | 0.16                   | 2.96                  |
| 3,900.0               | 3.73            | 263.82      | 3,894.5               | 31.7         | -151.3       | 40.0                    | 0.21                    | 0.20                   | -0.92                 |
| 3,925.0               | 3.69            | 266.43      | 3,919.5               | 31.6         | -152.9       | 40.0                    | 0.69                    | -0.16                  | 10.44                 |
| 3,950.0               | 3.52            | 265.66      | 3,944.4               | 31.5         | -154.4       | 40.0                    | 0.71                    | -0.68                  | -3.08                 |
| 3,975.0               | 3.30            | 269.04      | 3,969.4               | 31.4         | -155.9       | 40.0                    | 1.19                    | -0.88                  | 13.52                 |
| 4,000.0               | 3.17            | 275.41      | 3,994.3               | 31.5         | -157.3       | 40.1                    | 1.53                    | -0.52                  | 25.48                 |
| 4,025.0               | 3.39            | 290.19      | 4,019.3               | 31.8         | -158.7       | 40.5                    | 3.48                    | 0.88                   | 59.12                 |
| 4,050.0               | 3.53            | 298.63      | 4,044.2               | 32.4         | -160.1       | 41.2                    | 2.11                    | 0.56                   | 33.76                 |
| 4,075.0               | 3.63            | 299.77      | 4,069.2               | 33.2         | -161.5       | 42.0                    | 0.49                    | 0.40                   | 4.56                  |
| 4,100.0               | 4.03            | 298.41      | 4,094.1               | 34.0         | -162.9       | 42.9                    | 1.64                    | 1.60                   | -5.44                 |
| 4,125.0               | 4.75            | 296.25      | 4,119.1               | 34.9         | -164.6       | 43.9                    | 2.95                    | 2.88                   | -8.64                 |
| 4,150.0               | 5.06            | 294.30      | 4,144.0               | 35.8         | -166.5       | 44.9                    | 1.41                    | 1.24                   | -7.80                 |
| 4,175.0               | 5.03            | 295.01      | 4,168.9               | 36.7         | -168.5       | 45.9                    | 0.28                    | -0.12                  | 2.84                  |
| 4,200.0               | 5.02            | 295.96      | 4,193.8               | 37.6         | -170.5       | 47.0                    | 0.34                    | -0.04                  | 3.80                  |
| 4,225.0               | 5.04            | 294.79      | 4,218.7               | 38.6         | -172.5       | 48.0                    | 0.42                    | 0.08                   | -4.68                 |
| 4,250.0               | 5.13            | 294.04      | 4,243.6               | 39.5         | -174.5       | 49.1                    | 0.45                    | 0.36                   | -3.00                 |
| 4,275.0               | 4.97            | 293.24      | 4,268.5               | 40.4         | -176.5       | 50.1                    | 0.70                    | -0.64                  | -3.20                 |
| 4,300.0               | 5.03            | 292.48      | 4,293.4               | 41.2         | -178.5       | 51.0                    | 0.36                    | 0.24                   | -3.04                 |
| 4,325.0               | 5.06            | 292.01      | 4,318.3               | 42.1         | -180.6       | 51.9                    | 0.20                    | 0.12                   | -1.88                 |
| 4,350.0               | 4.80            | 293.58      | 4,343.2               | 42.9         | -182.6       | 52.9                    | 1.17                    | -1.04                  | 6.28                  |
| 4,375.0               | 4.93            | 294.52      | 4,368.1               | 43.7         | -184.5       | 53.9                    | 0.61                    | 0.52                   | 3.76                  |
| 4,400.0               | 4.83            | 294.82      | 4,393.0               | 44.6         | -186.4       | 54.9                    | 0.41                    | -0.40                  | 1.20                  |
| 4,425.0               | 4.72            | 295.03      | 4,417.9               | 45.5         | -188.3       | 55.8                    | 0.45                    | -0.44                  | 0.84                  |
| 4,450.0               | 4.09            | 295.45      | 4,442.9               | 46.3         | -190.0       | 56.7                    | 2.52                    | -2.52                  | 1.68                  |



# Survey Report

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Local Co-ordinate Reference: Well DOMINATOR 25 FED #605H  
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 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 4,475.0               | 3.85            | 297.35      | 4,467.8               | 47.1         | -191.6       | 57.6                    | 1.09                    | -0.96                  | 7.60                  |
| 4,500.0               | 3.46            | 297.46      | 4,492.8               | 47.8         | -193.0       | 58.4                    | 1.56                    | -1.56                  | 0.44                  |
| 4,525.0               | 3.47            | 297.81      | 4,517.7               | 48.5         | -194.4       | 59.2                    | 0.09                    | 0.04                   | 1.40                  |
| 4,550.0               | 3.11            | 299.49      | 4,542.7               | 49.2         | -195.6       | 59.9                    | 1.49                    | -1.44                  | 6.72                  |
| 4,575.0               | 3.08            | 297.98      | 4,567.6               | 49.9         | -196.8       | 60.6                    | 0.35                    | -0.12                  | -6.12                 |
| 4,600.0               | 3.06            | 298.69      | 4,592.6               | 50.5         | -198.0       | 61.3                    | 0.18                    | -0.08                  | 2.92                  |
| 4,625.0               | 3.05            | 297.08      | 4,617.6               | 51.1         | -199.2       | 62.0                    | 0.35                    | -0.04                  | -6.44                 |
| 4,650.0               | 3.30            | 292.11      | 4,642.5               | 51.7         | -200.4       | 62.7                    | 1.49                    | 1.00                   | -19.88                |
| 4,675.0               | 3.47            | 289.52      | 4,667.5               | 52.2         | -201.8       | 63.3                    | 0.91                    | 0.68                   | -10.36                |
| 4,700.0               | 3.38            | 287.72      | 4,692.4               | 52.7         | -203.2       | 63.8                    | 0.56                    | -0.36                  | -7.20                 |
| 4,725.0               | 3.33            | 276.76      | 4,717.4               | 53.0         | -204.6       | 64.2                    | 2.57                    | -0.20                  | -43.84                |
| 4,750.0               | 3.46            | 269.80      | 4,742.3               | 53.1         | -206.1       | 64.4                    | 1.70                    | 0.52                   | -27.44                |
| 4,775.0               | 3.36            | 263.99      | 4,767.3               | 53.0         | -207.6       | 64.4                    | 1.46                    | -0.40                  | -23.64                |
| 4,800.0               | 3.36            | 262.43      | 4,792.3               | 52.8         | -209.0       | 64.3                    | 0.37                    | 0.00                   | -6.24                 |
| 4,825.0               | 3.28            | 259.93      | 4,817.2               | 52.6         | -210.5       | 64.2                    | 0.66                    | -0.32                  | -10.00                |
| 4,850.0               | 2.84            | 251.71      | 4,842.2               | 52.3         | -211.8       | 63.9                    | 2.48                    | -1.76                  | -32.88                |
| 4,875.0               | 2.75            | 247.12      | 4,867.1               | 51.9         | -212.9       | 63.5                    | 0.96                    | -0.36                  | -18.36                |
| 4,900.0               | 2.57            | 241.58      | 4,892.1               | 51.4         | -214.0       | 63.1                    | 1.25                    | -0.72                  | -22.16                |
| 4,925.0               | 2.42            | 240.82      | 4,917.1               | 50.9         | -214.9       | 62.6                    | 0.61                    | -0.60                  | -3.04                 |
| 4,950.0               | 2.59            | 241.66      | 4,942.1               | 50.3         | -215.9       | 62.2                    | 0.70                    | 0.68                   | 3.36                  |
| 4,975.0               | 2.52            | 239.63      | 4,967.0               | 49.8         | -216.8       | 61.7                    | 0.46                    | -0.28                  | -8.12                 |
| 5,000.0               | 2.46            | 246.10      | 4,992.0               | 49.3         | -217.8       | 61.2                    | 1.15                    | -0.24                  | 25.88                 |
| 5,025.0               | 2.64            | 272.82      | 5,017.0               | 49.1         | -218.9       | 61.1                    | 4.76                    | 0.72                   | 106.88                |
| 5,050.0               | 2.90            | 280.44      | 5,042.0               | 49.2         | -220.1       | 61.3                    | 1.80                    | 1.04                   | 30.48                 |
| 5,075.0               | 2.94            | 287.27      | 5,066.9               | 49.5         | -221.3       | 61.7                    | 1.40                    | 0.16                   | 27.32                 |
| 5,100.0               | 3.21            | 297.43      | 5,091.9               | 50.1         | -222.5       | 62.3                    | 2.43                    | 1.08                   | 40.64                 |
| 5,125.0               | 3.30            | 306.90      | 5,116.9               | 50.8         | -223.7       | 63.1                    | 2.18                    | 0.36                   | 37.88                 |
| 5,150.0               | 3.36            | 309.46      | 5,141.8               | 51.7         | -224.9       | 64.0                    | 0.64                    | 0.24                   | 10.24                 |
| 5,175.0               | 3.39            | 309.67      | 5,166.8               | 52.6         | -226.0       | 65.0                    | 0.13                    | 0.12                   | 0.84                  |
| 5,200.0               | 3.41            | 307.95      | 5,191.7               | 53.6         | -227.2       | 66.0                    | 0.42                    | 0.08                   | -6.88                 |
| 5,225.0               | 3.31            | 309.15      | 5,216.7               | 54.5         | -228.3       | 67.0                    | 0.49                    | -0.40                  | 4.80                  |
| 5,250.0               | 3.03            | 302.84      | 5,241.7               | 55.3         | -229.4       | 67.9                    | 1.79                    | -1.12                  | -25.24                |
| 5,275.0               | 2.90            | 301.16      | 5,266.6               | 56.0         | -230.5       | 68.6                    | 0.63                    | -0.52                  | -6.72                 |
| 5,300.0               | 2.37            | 286.73      | 5,291.6               | 56.5         | -231.6       | 69.2                    | 3.38                    | -2.12                  | -57.72                |
| 5,325.0               | 2.28            | 284.78      | 5,316.6               | 56.7         | -232.5       | 69.5                    | 0.48                    | -0.36                  | -7.80                 |
| 5,350.0               | 1.98            | 277.19      | 5,341.6               | 56.9         | -233.4       | 69.7                    | 1.64                    | -1.20                  | -30.36                |
| 5,375.0               | 1.74            | 278.43      | 5,366.5               | 57.0         | -234.2       | 69.9                    | 0.97                    | -0.96                  | 4.96                  |
| 5,400.0               | 1.52            | 273.78      | 5,391.5               | 57.1         | -234.9       | 70.0                    | 1.03                    | -0.88                  | -18.60                |
| 5,425.0               | 1.23            | 272.70      | 5,416.5               | 57.1         | -235.5       | 70.0                    | 1.16                    | -1.16                  | -4.32                 |
| 5,450.0               | 0.66            | 261.14      | 5,441.5               | 57.1         | -236.0       | 70.1                    | 2.39                    | -2.28                  | -46.24                |
| 5,475.0               | 0.33            | 150.50      | 5,466.5               | 57.0         | -236.1       | 70.0                    | 3.34                    | -1.32                  | -442.56               |
| 5,500.0               | 0.39            | 143.69      | 5,491.5               | 56.9         | -236.0       | 69.8                    | 0.29                    | 0.24                   | -27.24                |



## Survey Report

**Company:** NORTHERN DELAWARE BASIN  
**Project:** LEA COUNTY, NM  
**Site:** BULLDOG  
**Well:** DOMINATOR 25 FED #605H  
**Wellbore:** OWB  
**Design:** ACTUAL WELLPATH

**Local Co-ordinate Reference:** Well DOMINATOR 25 FED #605H  
**TVD Reference:** RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
**MD Reference:** RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 5,525.0               | 0.58            | 134.70      | 5,516.5               | 56.8         | -235.8       | 69.7                    | 0.82                    | 0.76                   | -35.96                |
| 5,550.0               | 0.51            | 144.84      | 5,541.5               | 56.6         | -235.7       | 69.5                    | 0.48                    | -0.28                  | 40.56                 |
| 5,575.0               | 0.74            | 135.66      | 5,566.5               | 56.4         | -235.5       | 69.3                    | 1.00                    | 0.92                   | -36.72                |
| 5,600.0               | 0.62            | 138.01      | 5,591.5               | 56.2         | -235.3       | 69.1                    | 0.49                    | -0.48                  | 9.40                  |
| 5,625.0               | 0.66            | 128.13      | 5,616.5               | 56.0         | -235.1       | 68.9                    | 0.47                    | 0.16                   | -39.52                |
| 5,650.0               | 0.57            | 121.31      | 5,641.5               | 55.8         | -234.9       | 68.7                    | 0.46                    | -0.36                  | -27.28                |
| 5,675.0               | 0.71            | 135.73      | 5,666.5               | 55.6         | -234.7       | 68.5                    | 0.85                    | 0.56                   | 57.68                 |
| 5,700.0               | 0.64            | 123.56      | 5,691.5               | 55.5         | -234.4       | 68.3                    | 0.64                    | -0.28                  | -48.68                |
| 5,725.0               | 0.57            | 133.10      | 5,716.5               | 55.3         | -234.2       | 68.1                    | 0.49                    | -0.28                  | 38.16                 |
| 5,750.0               | 0.45            | 129.19      | 5,741.5               | 55.1         | -234.1       | 68.0                    | 0.50                    | -0.48                  | -15.64                |
| 5,775.0               | 0.28            | 125.14      | 5,766.5               | 55.0         | -233.9       | 67.9                    | 0.77                    | -0.76                  | -16.20                |
| 5,800.0               | 0.42            | 125.36      | 5,791.5               | 55.0         | -233.8       | 67.8                    | 0.64                    | 0.64                   | 0.88                  |
| 5,825.0               | 0.47            | 107.19      | 5,816.5               | 54.9         | -233.6       | 67.7                    | 0.60                    | 0.20                   | -72.68                |
| 5,850.0               | 0.42            | 116.97      | 5,841.5               | 54.8         | -233.5       | 67.6                    | 0.36                    | -0.20                  | 39.12                 |
| 5,875.0               | 0.42            | 119.72      | 5,866.5               | 54.7         | -233.3       | 67.5                    | 0.08                    | 0.00                   | 11.00                 |
| 5,900.0               | 0.50            | 133.42      | 5,891.5               | 54.6         | -233.1       | 67.4                    | 0.54                    | 0.32                   | 54.80                 |
| 5,925.0               | 0.51            | 122.82      | 5,916.5               | 54.5         | -233.0       | 67.2                    | 0.38                    | 0.04                   | -42.40                |
| 5,950.0               | 0.51            | 120.50      | 5,941.5               | 54.3         | -232.8       | 67.1                    | 0.08                    | 0.00                   | -9.28                 |
| 5,975.0               | 0.55            | 116.70      | 5,966.5               | 54.2         | -232.6       | 67.0                    | 0.21                    | 0.16                   | -15.20                |
| 6,000.0               | 0.55            | 125.76      | 5,991.5               | 54.1         | -232.4       | 66.8                    | 0.35                    | 0.00                   | 36.24                 |
| 6,025.0               | 0.53            | 112.61      | 6,016.5               | 54.0         | -232.2       | 66.7                    | 0.50                    | -0.08                  | -52.60                |
| 6,050.0               | 0.53            | 109.47      | 6,041.5               | 53.9         | -232.0       | 66.6                    | 0.12                    | 0.00                   | -12.56                |
| 6,075.0               | 0.37            | 134.07      | 6,066.5               | 53.8         | -231.8       | 66.5                    | 0.99                    | -0.64                  | 98.40                 |
| 6,100.0               | 0.43            | 123.41      | 6,091.5               | 53.7         | -231.7       | 66.4                    | 0.38                    | 0.24                   | -42.64                |
| 6,125.0               | 0.32            | 134.93      | 6,116.5               | 53.6         | -231.5       | 66.3                    | 0.53                    | -0.44                  | 46.08                 |
| 6,150.0               | 0.48            | 114.35      | 6,141.5               | 53.5         | -231.4       | 66.2                    | 0.85                    | 0.64                   | -82.32                |
| 6,175.0               | 0.28            | 102.96      | 6,166.5               | 53.5         | -231.2       | 66.1                    | 0.85                    | -0.80                  | -45.56                |
| 6,200.0               | 0.26            | 125.10      | 6,191.5               | 53.4         | -231.1       | 66.1                    | 0.42                    | -0.08                  | 88.56                 |
| 6,225.0               | 0.42            | 107.13      | 6,216.5               | 53.4         | -231.0       | 66.0                    | 0.76                    | 0.64                   | -71.88                |
| 6,250.0               | 0.16            | 126.58      | 6,241.5               | 53.3         | -230.9       | 66.0                    | 1.10                    | -1.04                  | 77.80                 |
| 6,275.0               | 0.21            | 117.24      | 6,266.5               | 53.3         | -230.8       | 65.9                    | 0.23                    | 0.20                   | -37.36                |
| 6,300.0               | 0.19            | 143.50      | 6,291.5               | 53.2         | -230.7       | 65.9                    | 0.37                    | -0.08                  | 105.04                |
| 6,325.0               | 0.25            | 132.45      | 6,316.5               | 53.1         | -230.7       | 65.8                    | 0.29                    | 0.24                   | -44.20                |
| 6,350.0               | 0.30            | 163.41      | 6,341.5               | 53.0         | -230.6       | 65.7                    | 0.62                    | 0.20                   | 123.84                |
| 6,375.0               | 0.13            | 118.20      | 6,366.5               | 53.0         | -230.6       | 65.6                    | 0.91                    | -0.68                  | -180.84               |
| 6,400.0               | 0.29            | 93.63       | 6,391.5               | 52.9         | -230.5       | 65.6                    | 0.72                    | 0.64                   | -98.28                |
| 6,425.0               | 0.18            | 118.02      | 6,416.5               | 52.9         | -230.4       | 65.6                    | 0.59                    | -0.44                  | 97.56                 |
| 6,450.0               | 0.36            | 143.32      | 6,441.5               | 52.8         | -230.3       | 65.5                    | 0.85                    | 0.72                   | 101.20                |
| 6,475.0               | 0.24            | 116.68      | 6,466.5               | 52.8         | -230.2       | 65.4                    | 0.72                    | -0.48                  | -106.56               |
| 6,500.0               | 0.26            | 101.04      | 6,491.5               | 52.7         | -230.1       | 65.3                    | 0.28                    | 0.08                   | -62.56                |
| 6,525.0               | 0.11            | 104.28      | 6,516.5               | 52.7         | -230.0       | 65.3                    | 0.60                    | -0.60                  | 12.96                 |
| 6,550.0               | 0.19            | 101.42      | 6,541.5               | 52.7         | -230.0       | 65.3                    | 0.32                    | 0.32                   | -11.44                |



# Survey Report

Company: NORTHERN DELAWARE BASIN  
Project: LEA COUNTY, NM  
Site: BULLDOG  
Well: DOMINATOR 25 FED #805H  
Wellbore: OWB  
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well DOMINATOR 25 FED #805H  
TVD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
MD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 6,575.0               | 0.19            | 114.22      | 6,566.5               | 52.7         | -229.9       | 65.3                    | 0.17                    | 0.00                   | 51.20                 |
| 6,600.0               | 0.18            | 63.94       | 6,591.5               | 52.7         | -229.8       | 65.3                    | 0.63                    | -0.04                  | -201.12               |
| 6,625.0               | 0.25            | 79.60       | 6,616.5               | 52.7         | -229.7       | 65.3                    | 0.36                    | 0.28                   | 62.64                 |
| 6,650.0               | 0.19            | 78.40       | 6,641.5               | 52.7         | -229.6       | 65.3                    | 0.24                    | -0.24                  | -4.80                 |
| 6,675.0               | 0.31            | 101.26      | 6,666.5               | 52.7         | -229.5       | 65.3                    | 0.62                    | 0.48                   | 91.44                 |
| 6,700.0               | 0.25            | 83.89       | 6,691.5               | 52.7         | -229.4       | 65.3                    | 0.41                    | -0.24                  | -69.48                |
| 6,725.0               | 0.18            | 77.03       | 6,716.5               | 52.7         | -229.3       | 65.3                    | 0.30                    | -0.28                  | -27.44                |
| 6,750.0               | 0.16            | 112.93      | 6,741.5               | 52.7         | -229.2       | 65.3                    | 0.43                    | -0.08                  | 143.60                |
| 6,775.0               | 0.07            | 82.76       | 6,766.5               | 52.7         | -229.2       | 65.3                    | 0.42                    | -0.36                  | -120.68               |
| 6,800.0               | 0.11            | 107.50      | 6,791.5               | 52.7         | -229.2       | 65.3                    | 0.22                    | 0.16                   | 98.96                 |
| 6,825.0               | 0.17            | 93.57       | 6,816.5               | 52.7         | -229.1       | 65.2                    | 0.27                    | 0.24                   | -55.72                |
| 6,850.0               | 0.12            | 90.90       | 6,841.5               | 52.7         | -229.0       | 65.2                    | 0.20                    | -0.20                  | -10.68                |
| 6,875.0               | 0.21            | 93.02       | 6,866.5               | 52.7         | -229.0       | 65.2                    | 0.36                    | 0.36                   | 8.48                  |
| 6,900.0               | 0.31            | 122.13      | 6,891.5               | 52.6         | -228.9       | 65.2                    | 0.65                    | 0.40                   | 116.44                |
| 6,925.0               | 0.27            | 91.93       | 6,916.5               | 52.6         | -228.7       | 65.1                    | 0.62                    | -0.16                  | -120.80               |
| 6,950.0               | 0.28            | 76.39       | 6,941.5               | 52.6         | -228.6       | 65.1                    | 0.30                    | 0.04                   | -62.16                |
| 6,975.0               | 0.17            | 91.04       | 6,966.5               | 52.6         | -228.5       | 65.2                    | 0.49                    | -0.44                  | 58.60                 |
| 7,000.0               | 0.32            | 83.44       | 6,991.5               | 52.6         | -228.4       | 65.2                    | 0.61                    | 0.60                   | -30.40                |
| 7,025.0               | 0.32            | 88.66       | 7,016.5               | 52.6         | -228.3       | 65.2                    | 0.12                    | 0.00                   | 20.88                 |
| 7,050.0               | 0.35            | 79.85       | 7,041.5               | 52.7         | -228.1       | 65.2                    | 0.24                    | 0.12                   | -35.24                |
| 7,075.0               | 0.35            | 57.56       | 7,066.5               | 52.7         | -228.0       | 65.2                    | 0.54                    | 0.00                   | -89.16                |
| 7,100.0               | 0.24            | 92.06       | 7,091.5               | 52.8         | -227.9       | 65.2                    | 0.82                    | -0.44                  | 138.00                |
| 7,125.0               | 0.21            | 60.34       | 7,116.5               | 52.8         | -227.8       | 65.3                    | 0.51                    | -0.12                  | -126.88               |
| 7,150.0               | 0.20            | 89.60       | 7,141.5               | 52.8         | -227.7       | 65.3                    | 0.42                    | -0.04                  | 117.04                |
| 7,175.0               | 0.33            | 51.33       | 7,166.5               | 52.8         | -227.6       | 65.3                    | 0.85                    | 0.52                   | -153.08               |
| 7,200.0               | 0.33            | 81.51       | 7,191.5               | 52.9         | -227.5       | 65.4                    | 0.69                    | 0.00                   | 120.72                |
| 7,225.0               | 0.21            | 60.76       | 7,216.5               | 52.9         | -227.4       | 65.4                    | 0.61                    | -0.48                  | -83.00                |
| 7,250.0               | 0.12            | 63.57       | 7,241.5               | 53.0         | -227.3       | 65.4                    | 0.36                    | -0.36                  | 11.24                 |
| 7,275.0               | 0.33            | 88.76       | 7,266.5               | 53.0         | -227.2       | 65.4                    | 0.91                    | 0.84                   | 100.76                |
| 7,300.0               | 0.19            | 93.25       | 7,291.5               | 53.0         | -227.1       | 65.4                    | 0.57                    | -0.56                  | 17.96                 |
| 7,325.0               | 0.22            | 77.32       | 7,316.5               | 53.0         | -227.0       | 65.4                    | 0.26                    | 0.12                   | -63.72                |
| 7,350.0               | 0.29            | 105.39      | 7,341.5               | 53.0         | -226.9       | 65.4                    | 0.56                    | 0.28                   | 112.28                |
| 7,375.0               | 0.28            | 91.38       | 7,366.5               | 53.0         | -226.8       | 65.4                    | 0.28                    | -0.04                  | -56.04                |
| 7,400.0               | 0.30            | 83.80       | 7,391.5               | 53.0         | -226.6       | 65.4                    | 0.17                    | 0.08                   | -30.32                |
| 7,425.0               | 0.21            | 95.27       | 7,416.5               | 53.0         | -226.5       | 65.4                    | 0.41                    | -0.36                  | 45.88                 |
| 7,450.0               | 0.06            | 348.15      | 7,441.5               | 53.0         | -226.5       | 65.4                    | 0.94                    | -0.60                  | -428.48               |
| 7,475.0               | 0.30            | 190.71      | 7,466.5               | 52.9         | -226.5       | 65.3                    | 1.42                    | 0.96                   | -629.76               |
| 7,500.0               | 0.13            | 267.68      | 7,491.5               | 52.9         | -226.6       | 65.3                    | 1.20                    | -0.68                  | 307.88                |
| 7,525.0               | 0.15            | 261.54      | 7,516.5               | 52.9         | -226.6       | 65.3                    | 0.10                    | 0.08                   | -24.56                |
| 7,550.0               | 0.14            | 247.60      | 7,541.5               | 52.8         | -226.7       | 65.3                    | 0.15                    | -0.04                  | -55.76                |
| 7,575.0               | 0.30            | 278.47      | 7,566.5               | 52.8         | -226.8       | 65.3                    | 0.77                    | 0.64                   | 123.48                |
| 7,600.0               | 0.25            | 277.12      | 7,591.5               | 52.9         | -226.9       | 65.3                    | 0.20                    | -0.20                  | -5.40                 |



# Survey Report

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 Wellbore: OWB  
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Local Co-ordinate Reference: Well DOMINATOR 25 FED #605H  
 TVD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
 MD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 7,625.0               | 0.28            | 272.33      | 7,616.5               | 52.9         | -227.0       | 65.3                    | 0.15                    | 0.12                   | -19.16                |
| 7,650.0               | 0.29            | 289.91      | 7,641.5               | 52.9         | -227.1       | 65.3                    | 0.35                    | 0.04                   | 70.32                 |
| 7,675.0               | 0.35            | 259.99      | 7,666.5               | 52.9         | -227.3       | 65.4                    | 0.70                    | 0.24                   | -119.68               |
| 7,700.0               | 0.29            | 250.79      | 7,691.5               | 52.9         | -227.4       | 65.3                    | 0.32                    | -0.24                  | -36.80                |
| 7,725.0               | 0.21            | 249.41      | 7,716.5               | 52.8         | -227.5       | 65.3                    | 0.32                    | -0.32                  | -5.52                 |
| 7,750.0               | 0.31            | 265.20      | 7,741.5               | 52.8         | -227.6       | 65.3                    | 0.49                    | 0.40                   | 63.16                 |
| 7,775.0               | 0.24            | 249.71      | 7,766.5               | 52.8         | -227.7       | 65.3                    | 0.41                    | -0.28                  | -61.96                |
| 7,800.0               | 0.35            | 257.25      | 7,791.5               | 52.7         | -227.8       | 65.2                    | 0.47                    | 0.44                   | 30.16                 |
| 7,825.0               | 0.32            | 267.12      | 7,816.5               | 52.7         | -228.0       | 65.2                    | 0.26                    | -0.12                  | 39.48                 |
| 7,850.0               | 0.28            | 245.98      | 7,841.5               | 52.7         | -228.1       | 65.2                    | 0.47                    | -0.16                  | -84.56                |
| 7,875.0               | 0.28            | 234.60      | 7,866.5               | 52.6         | -228.2       | 65.1                    | 0.22                    | 0.00                   | -45.52                |
| 7,900.0               | 0.38            | 249.22      | 7,891.5               | 52.6         | -228.3       | 65.1                    | 0.52                    | 0.40                   | 58.48                 |
| 7,925.0               | 0.36            | 257.73      | 7,916.5               | 52.5         | -228.5       | 65.0                    | 0.23                    | -0.08                  | 34.04                 |
| 7,950.0               | 0.38            | 247.73      | 7,941.5               | 52.5         | -228.7       | 65.0                    | 0.27                    | 0.08                   | -40.00                |
| 7,975.0               | 0.37            | 245.65      | 7,966.5               | 52.4         | -228.8       | 65.0                    | 0.07                    | -0.04                  | -8.32                 |
| 8,000.0               | 0.45            | 225.23      | 7,991.5               | 52.3         | -228.9       | 64.9                    | 0.66                    | 0.32                   | -81.68                |
| 8,025.0               | 0.43            | 243.66      | 8,016.5               | 52.2         | -229.1       | 64.8                    | 0.57                    | -0.08                  | 73.72                 |
| 8,050.0               | 0.39            | 233.03      | 8,041.5               | 52.1         | -229.3       | 64.7                    | 0.34                    | -0.16                  | -42.52                |
| 8,075.0               | 0.58            | 229.90      | 8,066.5               | 52.0         | -229.4       | 64.5                    | 0.77                    | 0.76                   | -12.52                |
| 8,100.0               | 0.48            | 245.16      | 8,091.5               | 51.8         | -229.6       | 64.4                    | 0.69                    | -0.40                  | 61.04                 |
| 8,125.0               | 0.56            | 227.27      | 8,116.5               | 51.7         | -229.8       | 64.3                    | 0.72                    | 0.32                   | -71.56                |
| 8,150.0               | 0.45            | 212.53      | 8,141.5               | 51.6         | -229.9       | 64.2                    | 0.68                    | -0.44                  | -58.96                |
| 8,175.0               | 0.54            | 228.28      | 8,166.5               | 51.4         | -230.1       | 64.0                    | 0.65                    | 0.36                   | 63.00                 |
| 8,200.0               | 0.50            | 211.30      | 8,191.5               | 51.2         | -230.2       | 63.8                    | 0.63                    | -0.16                  | -67.92                |
| 8,225.0               | 0.40            | 230.84      | 8,216.5               | 51.1         | -230.3       | 63.7                    | 0.73                    | -0.40                  | 78.16                 |
| 8,250.0               | 0.46            | 227.63      | 8,241.5               | 51.0         | -230.5       | 63.6                    | 0.26                    | 0.24                   | -12.84                |
| 8,275.0               | 0.31            | 218.60      | 8,266.5               | 50.8         | -230.6       | 63.5                    | 0.65                    | -0.60                  | -36.12                |
| 8,300.0               | 0.52            | 219.84      | 8,291.5               | 50.7         | -230.7       | 63.3                    | 0.84                    | 0.84                   | 4.96                  |
| 8,325.0               | 0.41            | 195.37      | 8,316.5               | 50.5         | -230.8       | 63.2                    | 0.90                    | -0.44                  | -97.88                |
| 8,350.0               | 0.37            | 217.67      | 8,341.5               | 50.4         | -230.9       | 63.0                    | 0.62                    | -0.16                  | 89.20                 |
| 8,375.0               | 0.58            | 217.53      | 8,366.5               | 50.2         | -231.0       | 62.9                    | 0.84                    | 0.84                   | -0.56                 |
| 8,400.0               | 0.53            | 208.81      | 8,391.5               | 50.0         | -231.1       | 62.7                    | 0.39                    | -0.20                  | -34.88                |
| 8,425.0               | 0.55            | 211.02      | 8,416.5               | 49.8         | -231.3       | 62.5                    | 0.12                    | 0.08                   | 8.84                  |
| 8,450.0               | 0.44            | 224.36      | 8,441.5               | 49.6         | -231.4       | 62.3                    | 0.63                    | -0.44                  | 53.36                 |
| 8,475.0               | 0.41            | 222.18      | 8,466.5               | 49.5         | -231.5       | 62.2                    | 0.14                    | -0.12                  | -8.72                 |
| 8,500.0               | 0.37            | 223.50      | 8,491.5               | 49.4         | -231.6       | 62.1                    | 0.16                    | -0.16                  | 5.28                  |
| 8,525.0               | 0.55            | 227.14      | 8,516.5               | 49.2         | -231.8       | 61.9                    | 0.73                    | 0.72                   | 14.56                 |
| 8,550.0               | 0.56            | 212.96      | 8,541.5               | 49.0         | -231.9       | 61.8                    | 0.55                    | 0.04                   | -56.72                |
| 8,575.0               | 0.52            | 220.36      | 8,566.5               | 48.9         | -232.1       | 61.6                    | 0.32                    | -0.16                  | 29.60                 |
| 8,600.0               | 0.54            | 206.83      | 8,591.5               | 48.7         | -232.2       | 61.4                    | 0.51                    | 0.08                   | -54.12                |
| 8,625.0               | 0.61            | 225.10      | 8,616.5               | 48.5         | -232.3       | 61.2                    | 0.78                    | 0.28                   | 73.08                 |
| 8,650.0               | 0.72            | 222.38      | 8,641.5               | 48.3         | -232.5       | 61.0                    | 0.46                    | 0.44                   | -10.88                |



# Survey Report

Company: NORTHERN DELAWARE BASIN  
Project: LEA COUNTY, NM  
Site: BULLDOG  
Well: DOMINATOR 25 FED #605H  
Wellbore: OWB  
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well DOMINATOR 25 FED #605H  
TVD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
MD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 8,675.0               | 0.67            | 216.92      | 8,666.4               | 48.0         | -232.7       | 60.8                    | 0.33                    | -0.20                  | -21.84                |
| 8,700.0               | 0.49            | 218.10      | 8,691.4               | 47.8         | -232.9       | 60.6                    | 0.72                    | -0.72                  | 4.72                  |
| 8,725.0               | 0.64            | 221.40      | 8,716.4               | 47.6         | -233.1       | 60.4                    | 0.61                    | 0.60                   | 13.20                 |
| 8,750.0               | 0.60            | 213.38      | 8,741.4               | 47.4         | -233.2       | 60.2                    | 0.38                    | -0.16                  | -32.08                |
| 8,775.0               | 0.50            | 235.54      | 8,766.4               | 47.2         | -233.4       | 60.0                    | 0.93                    | -0.40                  | 88.64                 |
| 8,800.0               | 0.48            | 239.52      | 8,791.4               | 47.1         | -233.6       | 59.9                    | 0.16                    | -0.08                  | 15.92                 |
| 8,825.0               | 0.51            | 240.10      | 8,816.4               | 47.0         | -233.7       | 59.8                    | 0.12                    | 0.12                   | 2.32                  |
| 8,850.0               | 0.41            | 252.63      | 8,841.4               | 46.9         | -233.9       | 59.8                    | 0.57                    | -0.40                  | 50.12                 |
| 8,875.0               | 0.35            | 329.46      | 8,866.4               | 47.0         | -234.1       | 59.8                    | 1.90                    | -0.24                  | 307.32                |
| 8,900.0               | 0.35            | 310.47      | 8,891.4               | 47.1         | -234.1       | 59.9                    | 0.46                    | 0.00                   | -75.96                |
| 8,925.0               | 0.30            | 342.36      | 8,916.4               | 47.2         | -234.2       | 60.1                    | 0.74                    | -0.20                  | 127.56                |
| 8,950.0               | 0.35            | 324.30      | 8,941.4               | 47.3         | -234.3       | 60.2                    | 0.45                    | 0.20                   | -72.24                |
| 8,975.0               | 0.36            | 336.46      | 8,966.4               | 47.5         | -234.4       | 60.3                    | 0.30                    | 0.04                   | 48.64                 |
| 9,000.0               | 0.42            | 336.49      | 8,991.4               | 47.6         | -234.4       | 60.5                    | 0.24                    | 0.24                   | 0.12                  |
| 9,025.0               | 0.45            | 332.19      | 9,016.4               | 47.8         | -234.5       | 60.7                    | 0.18                    | 0.12                   | -17.20                |
| 9,050.0               | 0.39            | 353.17      | 9,041.4               | 48.0         | -234.6       | 60.8                    | 0.66                    | -0.24                  | 83.92                 |
| 9,075.0               | 0.41            | 329.39      | 9,066.4               | 48.1         | -234.6       | 61.0                    | 0.66                    | 0.08                   | -95.12                |
| 9,100.0               | 0.38            | 352.00      | 9,091.4               | 48.3         | -234.7       | 61.2                    | 0.63                    | -0.12                  | 90.44                 |
| 9,125.0               | 0.46            | 339.78      | 9,116.4               | 48.5         | -234.7       | 61.3                    | 0.48                    | 0.32                   | -48.88                |
| 9,150.0               | 0.20            | 306.02      | 9,141.4               | 48.6         | -234.8       | 61.5                    | 1.26                    | -1.04                  | -135.04               |
| 9,175.0               | 0.21            | 1.69        | 9,166.4               | 48.6         | -234.8       | 61.5                    | 0.77                    | 0.04                   | 222.68                |
| 9,200.0               | 0.30            | 319.89      | 9,191.4               | 48.7         | -234.9       | 61.6                    | 0.80                    | 0.36                   | -167.20               |
| 9,225.0               | 0.39            | 326.16      | 9,216.4               | 48.9         | -235.0       | 61.8                    | 0.39                    | 0.36                   | 25.08                 |
| 9,250.0               | 0.28            | 312.17      | 9,241.4               | 49.0         | -235.1       | 61.9                    | 0.55                    | -0.44                  | -55.96                |
| 9,275.0               | 0.31            | 315.57      | 9,266.4               | 49.1         | -235.2       | 62.0                    | 0.14                    | 0.12                   | 13.60                 |
| 9,300.0               | 0.38            | 307.08      | 9,291.4               | 49.2         | -235.3       | 62.1                    | 0.35                    | 0.28                   | -33.96                |
| 9,325.0               | 0.27            | 288.81      | 9,316.4               | 49.2         | -235.4       | 62.1                    | 0.60                    | -0.44                  | -73.08                |
| 9,350.0               | 0.24            | 287.45      | 9,341.4               | 49.3         | -235.5       | 62.2                    | 0.12                    | -0.12                  | -5.44                 |
| 9,375.0               | 0.24            | 258.38      | 9,366.4               | 49.3         | -235.6       | 62.2                    | 0.48                    | 0.00                   | -116.28               |
| 9,400.0               | 0.19            | 302.44      | 9,391.4               | 49.3         | -235.7       | 62.2                    | 0.67                    | -0.20                  | 176.24                |
| 9,425.0               | 0.16            | 255.99      | 9,416.4               | 49.3         | -235.8       | 62.2                    | 0.56                    | -0.12                  | -185.80               |
| 9,450.0               | 0.15            | 251.04      | 9,441.4               | 49.3         | -235.8       | 62.2                    | 0.07                    | -0.04                  | -19.80                |
| 9,475.0               | 0.20            | 252.67      | 9,466.4               | 49.3         | -235.9       | 62.2                    | 0.20                    | 0.20                   | 6.52                  |
| 9,500.0               | 0.31            | 249.12      | 9,491.4               | 49.2         | -236.0       | 62.2                    | 0.44                    | 0.44                   | -14.20                |
| 9,525.0               | 0.29            | 201.30      | 9,516.4               | 49.1         | -236.1       | 62.1                    | 0.98                    | -0.08                  | -191.28               |
| 9,550.0               | 0.44            | 204.49      | 9,541.4               | 49.0         | -236.1       | 61.9                    | 0.61                    | 0.60                   | 12.76                 |
| 9,575.0               | 0.51            | 197.45      | 9,566.4               | 48.8         | -236.2       | 61.8                    | 0.36                    | 0.28                   | -28.16                |
| 9,600.0               | 0.63            | 205.95      | 9,591.4               | 48.6         | -236.3       | 61.5                    | 0.59                    | 0.48                   | 34.00                 |
| 9,625.0               | 0.66            | 205.45      | 9,616.4               | 48.3         | -236.4       | 61.3                    | 0.12                    | 0.12                   | -2.00                 |
| 9,650.0               | 0.71            | 199.73      | 9,641.4               | 48.0         | -236.5       | 61.0                    | 0.34                    | 0.20                   | -22.88                |
| 9,675.0               | 0.63            | 196.10      | 9,666.4               | 47.8         | -236.6       | 60.7                    | 0.36                    | -0.32                  | -14.52                |
| 9,700.0               | 0.83            | 198.79      | 9,691.4               | 47.5         | -236.7       | 60.4                    | 0.81                    | 0.80                   | 10.76                 |



## Survey Report

**Company:** NORTHERN DELAWARE BASIN  
**Project:** LEA COUNTY, NM  
**Site:** BULLDOG  
**Well:** DOMINATOR 25 FED #605H  
**Wellbore:** OWB  
**Design:** ACTUAL WELLPATH

**Local Co-ordinate Reference:** Well DOMINATOR 25 FED #605H  
**TVD Reference:** RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
**MD Reference:** RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,725.0               | 0.85            | 190.75      | 9,716.4               | 47.1         | -236.8       | 60.1                    | 0.48                    | 0.08                   | -32.16                |
| 9,750.0               | 0.56            | 172.73      | 9,741.4               | 46.8         | -236.8       | 59.8                    | 1.45                    | -1.16                  | -72.08                |
| 9,775.0               | 0.55            | 94.57       | 9,766.4               | 46.7         | -236.7       | 59.7                    | 2.80                    | -0.04                  | -312.64               |
| 9,800.0               | 0.42            | 85.86       | 9,791.4               | 46.7         | -236.5       | 59.6                    | 0.60                    | -0.52                  | -34.84                |
| 9,825.0               | 0.66            | 82.06       | 9,816.4               | 46.7         | -236.3       | 59.7                    | 0.97                    | 0.96                   | -15.20                |
| 9,850.0               | 0.73            | 84.14       | 9,841.4               | 46.7         | -236.0       | 59.7                    | 0.30                    | 0.28                   | 8.32                  |
| 9,875.0               | 0.84            | 92.22       | 9,866.4               | 46.7         | -235.6       | 59.7                    | 0.62                    | 0.44                   | 32.32                 |
| 9,900.0               | 1.11            | 95.01       | 9,891.4               | 46.7         | -235.2       | 59.6                    | 1.10                    | 1.08                   | 11.16                 |
| 9,925.0               | 1.05            | 106.21      | 9,916.4               | 46.6         | -234.7       | 59.5                    | 0.88                    | -0.24                  | 44.80                 |
| 9,950.0               | 1.01            | 109.38      | 9,941.4               | 46.5         | -234.3       | 59.3                    | 0.28                    | -0.16                  | 12.68                 |
| 9,975.0               | 1.10            | 111.05      | 9,966.4               | 46.3         | -233.9       | 59.2                    | 0.38                    | 0.36                   | 6.68                  |
| 10,000.0              | 1.04            | 106.82      | 9,991.4               | 46.2         | -233.4       | 59.0                    | 0.40                    | -0.24                  | -16.92                |
| 10,025.0              | 1.14            | 111.01      | 10,016.4              | 46.0         | -233.0       | 58.8                    | 0.51                    | 0.40                   | 16.76                 |
| 10,050.0              | 1.05            | 111.12      | 10,041.4              | 45.8         | -232.5       | 58.6                    | 0.36                    | -0.36                  | 0.44                  |
| 10,075.0              | 1.19            | 119.31      | 10,066.4              | 45.6         | -232.1       | 58.4                    | 0.85                    | 0.56                   | 32.76                 |
| 10,100.0              | 0.90            | 116.53      | 10,091.4              | 45.4         | -231.7       | 58.1                    | 1.18                    | -1.16                  | -11.12                |
| 10,125.0              | 0.42            | 117.48      | 10,116.4              | 45.3         | -231.4       | 58.0                    | 1.92                    | -1.92                  | 3.80                  |
| 10,150.0              | 0.26            | 157.55      | 10,141.4              | 45.2         | -231.3       | 57.9                    | 1.11                    | -0.64                  | 160.28                |
| 10,175.0              | 0.23            | 213.75      | 10,166.4              | 45.1         | -231.3       | 57.8                    | 0.93                    | -0.12                  | 224.80                |
| 10,200.0              | 0.54            | 231.94      | 10,191.4              | 45.0         | -231.5       | 57.7                    | 1.32                    | 1.24                   | 72.76                 |
| 10,225.0              | 0.98            | 234.88      | 10,216.4              | 44.8         | -231.7       | 57.5                    | 1.77                    | 1.76                   | 11.76                 |
| 10,250.0              | 1.14            | 231.78      | 10,241.4              | 44.5         | -232.1       | 57.3                    | 0.68                    | 0.64                   | -12.40                |
| 10,275.0              | 1.28            | 242.93      | 10,266.4              | 44.2         | -232.5       | 57.0                    | 1.09                    | 0.56                   | 44.60                 |
| 10,300.0              | 1.37            | 233.69      | 10,291.3              | 43.9         | -233.0       | 56.7                    | 0.93                    | 0.36                   | -36.96                |
| 10,325.0              | 1.47            | 238.27      | 10,316.3              | 43.6         | -233.5       | 56.4                    | 0.47                    | 0.40                   | 10.32                 |
| 10,350.0              | 1.43            | 241.77      | 10,341.3              | 43.3         | -234.1       | 56.1                    | 0.58                    | -0.16                  | 22.00                 |
| 10,375.0              | 1.46            | 243.31      | 10,366.3              | 43.0         | -234.6       | 55.8                    | 0.20                    | 0.12                   | 6.16                  |
| 10,400.0              | 1.45            | 247.97      | 10,391.3              | 42.7         | -235.2       | 55.6                    | 0.47                    | -0.04                  | 18.64                 |
| 10,425.0              | 1.25            | 273.82      | 10,416.3              | 42.6         | -235.8       | 55.5                    | 2.54                    | -0.80                  | 103.40                |
| 10,450.0              | 1.27            | 285.37      | 10,441.3              | 42.7         | -236.3       | 55.7                    | 1.02                    | 0.08                   | 46.20                 |
| 10,475.0              | 1.26            | 282.49      | 10,466.3              | 42.8         | -236.9       | 55.8                    | 0.26                    | -0.04                  | -11.52                |
| 10,500.0              | 1.40            | 276.93      | 10,491.3              | 42.9         | -237.4       | 56.0                    | 0.76                    | 0.56                   | -22.24                |
| 10,525.0              | 1.45            | 279.84      | 10,516.3              | 43.0         | -238.0       | 56.1                    | 0.35                    | 0.20                   | 11.64                 |
| 10,550.0              | 1.32            | 280.44      | 10,541.3              | 43.1         | -238.6       | 56.2                    | 0.52                    | -0.52                  | 2.40                  |
| 10,575.0              | 1.48            | 286.59      | 10,566.3              | 43.3         | -239.2       | 56.4                    | 0.88                    | 0.64                   | 24.60                 |
| 10,600.0              | 1.46            | 304.32      | 10,591.3              | 43.5         | -239.8       | 56.7                    | 1.81                    | -0.08                  | 70.92                 |
| 10,625.0              | 1.38            | 310.15      | 10,616.3              | 43.9         | -240.3       | 57.1                    | 0.66                    | -0.32                  | 23.32                 |
| 10,650.0              | 1.29            | 303.29      | 10,641.2              | 44.3         | -240.8       | 57.5                    | 0.73                    | -0.36                  | -27.44                |
| 10,675.0              | 1.13            | 321.05      | 10,666.2              | 44.6         | -241.2       | 57.8                    | 1.62                    | -0.64                  | 71.04                 |
| 10,700.0              | 0.58            | 343.68      | 10,691.2              | 44.9         | -241.3       | 58.2                    | 2.54                    | -2.20                  | 90.52                 |
| 10,725.0              | 0.27            | 32.94       | 10,716.2              | 45.1         | -241.4       | 58.3                    | 1.81                    | -1.24                  | 197.04                |
| 10,750.0              | 0.28            | 30.43       | 10,741.2              | 45.2         | -241.3       | 58.4                    | 0.06                    | 0.04                   | -10.04                |



# Survey Report

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Local Co-ordinate Reference: Well DOMINATOR 25 FED #605H  
TVD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
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## 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 10,775.0              | 0.24            | 24.20       | 10,766.2              | 45.3         | -241.2       | 58.5                    | 0.20                    | -0.16                  | -24.92                |
| 10,800.0              | 0.32            | 339.39      | 10,791.2              | 45.4         | -241.2       | 58.6                    | 0.90                    | 0.32                   | -179.24               |
| 10,825.0              | 0.29            | 342.00      | 10,816.2              | 45.5         | -241.3       | 58.8                    | 0.13                    | -0.12                  | 10.44                 |
| 10,850.0              | 0.27            | 338.13      | 10,841.2              | 45.6         | -241.3       | 58.9                    | 0.11                    | -0.08                  | -15.48                |
| 10,875.0              | 0.24            | 350.50      | 10,866.2              | 45.8         | -241.4       | 59.0                    | 0.25                    | -0.12                  | 49.48                 |
| 10,900.0              | 0.32            | 353.25      | 10,891.2              | 45.9         | -241.4       | 59.1                    | 0.32                    | 0.32                   | 11.00                 |
| 10,925.0              | 0.74            | 11.92       | 10,916.2              | 46.1         | -241.3       | 59.3                    | 1.79                    | 1.68                   | 74.68                 |
| 10,950.0              | 0.97            | 15.92       | 10,941.2              | 46.5         | -241.3       | 59.7                    | 0.95                    | 0.92                   | 16.00                 |
| 10,975.0              | 0.91            | 20.49       | 10,966.2              | 46.8         | -241.1       | 60.1                    | 0.38                    | -0.24                  | 18.28                 |
| 11,000.0              | 0.93            | 20.24       | 10,991.2              | 47.2         | -241.0       | 60.4                    | 0.08                    | 0.08                   | -1.00                 |
| 11,025.0              | 0.99            | 13.91       | 11,016.2              | 47.6         | -240.9       | 60.8                    | 0.49                    | 0.24                   | -25.32                |
| 11,050.0              | 1.06            | 2.29        | 11,041.2              | 48.1         | -240.8       | 61.3                    | 0.88                    | 0.28                   | -46.48                |
| 11,075.0              | 1.17            | 357.05      | 11,066.2              | 48.6         | -240.8       | 61.8                    | 0.60                    | 0.44                   | -20.96                |
| 11,100.0              | 1.43            | 357.78      | 11,091.2              | 49.1         | -240.8       | 62.3                    | 1.04                    | 1.04                   | 2.92                  |
| 11,125.0              | 1.69            | 359.91      | 11,116.2              | 49.8         | -240.8       | 63.0                    | 1.07                    | 1.04                   | 8.52                  |
| 11,150.0              | 1.98            | 355.53      | 11,141.2              | 50.6         | -240.9       | 63.8                    | 1.29                    | 1.16                   | -17.52                |
| 11,175.0              | 2.31            | 354.83      | 11,166.2              | 51.5         | -241.0       | 64.7                    | 1.32                    | 1.32                   | -2.80                 |
| 11,200.0              | 2.71            | 353.11      | 11,191.1              | 52.6         | -241.1       | 65.8                    | 1.63                    | 1.60                   | -6.88                 |
| 11,225.0              | 2.78            | 354.22      | 11,216.1              | 53.8         | -241.2       | 67.0                    | 0.35                    | 0.28                   | 4.44                  |
| 11,250.0              | 2.85            | 352.72      | 11,241.1              | 55.0         | -241.3       | 68.3                    | 0.41                    | 0.28                   | -6.00                 |
| 11,275.0              | 2.75            | 0.41        | 11,266.1              | 56.2         | -241.4       | 69.5                    | 1.55                    | -0.40                  | 30.76                 |
| 11,300.0              | 2.32            | 24.90       | 11,291.0              | 57.3         | -241.2       | 70.5                    | 4.62                    | -1.72                  | 97.96                 |
| 11,325.0              | 2.30            | 41.69       | 11,316.0              | 58.1         | -240.7       | 71.3                    | 2.70                    | -0.08                  | 67.16                 |
| 11,350.0              | 2.30            | 44.94       | 11,341.0              | 58.9         | -240.0       | 72.0                    | 0.52                    | 0.00                   | 13.00                 |
| 11,375.0              | 2.20            | 51.55       | 11,366.0              | 59.5         | -239.2       | 72.6                    | 1.11                    | -0.40                  | 26.44                 |
| 11,400.0              | 1.83            | 68.87       | 11,391.0              | 60.0         | -238.5       | 73.0                    | 2.83                    | -1.48                  | 69.28                 |
| 11,425.0              | 1.57            | 85.77       | 11,415.9              | 60.1         | -237.8       | 73.2                    | 2.25                    | -1.04                  | 67.60                 |
| 11,450.0              | 1.28            | 111.47      | 11,440.9              | 60.1         | -237.2       | 73.0                    | 2.78                    | -1.16                  | 102.80                |
| 11,475.0              | 1.16            | 125.39      | 11,465.9              | 59.8         | -236.7       | 72.8                    | 1.27                    | -0.48                  | 55.68                 |
| 11,500.0              | 0.95            | 139.87      | 11,490.9              | 59.5         | -236.4       | 72.4                    | 1.35                    | -0.84                  | 57.92                 |
| 11,525.0              | 1.00            | 152.17      | 11,515.9              | 59.2         | -236.1       | 72.1                    | 0.86                    | 0.20                   | 49.20                 |
| 11,550.0              | 0.92            | 166.49      | 11,540.9              | 58.8         | -236.0       | 71.7                    | 1.01                    | -0.32                  | 57.28                 |
| 11,575.0              | 0.86            | 193.13      | 11,565.9              | 58.4         | -236.0       | 71.3                    | 1.66                    | -0.24                  | 106.56                |
| 11,600.0              | 0.87            | 210.33      | 11,590.9              | 58.0         | -236.1       | 71.0                    | 1.04                    | 0.04                   | 68.80                 |
| 11,625.0              | 0.97            | 226.90      | 11,615.9              | 57.7         | -236.4       | 70.7                    | 1.13                    | 0.40                   | 66.28                 |
| 11,635.0              | 1.05            | 231.99      | 11,625.9              | 57.6         | -236.5       | 70.6                    | 1.20                    | 0.80                   | 50.90                 |
| 11,780.0              | 0.87            | 232.71      | 11,770.9              | 56.1         | -238.4       | 69.2                    | 0.12                    | -0.12                  | 0.50                  |
| 11,869.0              | 0.92            | 212.23      | 11,859.9              | 55.1         | -239.3       | 68.2                    | 0.36                    | 0.06                   | -23.01                |
| 11,900.0              | 0.80            | 270.53      | 11,890.9              | 54.9         | -239.7       | 68.0                    | 2.72                    | -0.39                  | 188.06                |
| 11,932.0              | 2.48            | 348.14      | 11,922.9              | 55.6         | -240.1       | 68.7                    | 7.62                    | 5.25                   | 242.53                |
| 11,964.0              | 6.52            | 351.02      | 11,954.8              | 58.1         | -240.5       | 71.2                    | 12.64                   | 12.63                  | 9.00                  |
| 11,995.0              | 12.00           | 351.00      | 11,985.3              | 63.0         | -241.3       | 76.2                    | 17.68                   | 17.68                  | -0.06                 |



# Survey Report

Company: NORTHERN DELAWARE BASIN  
Project: LEA COUNTY, NM  
Site: BULLDOG  
Well: DOMINATOR 25 FED #605H  
Wellbore: OWB  
Design: ACTUAL WELLPATH

Local Co-ordinate Reference: Well DOMINATOR 25 FED #605H  
TVD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
MD Reference: RKB=3340.1+25 @ 3365.1usft (PRECISION 595)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 12,027.0              | 17.03           | 351.80      | 12,016.3              | 70.9         | -242.5       | 84.2                    | 15.73                   | 15.72                  | 2.50                  |
| 12,059.0              | 21.00           | 351.71      | 12,046.6              | 81.2         | -244.0       | 94.6                    | 12.41                   | 12.41                  | -0.28                 |
| 12,090.0              | 25.07           | 348.68      | 12,075.1              | 93.2         | -246.0       | 106.6                   | 13.67                   | 13.13                  | -9.77                 |
| 12,122.0              | 27.78           | 348.60      | 12,103.7              | 107.1        | -248.8       | 120.7                   | 8.47                    | 8.47                   | -0.25                 |
| 12,153.0              | 31.30           | 350.15      | 12,130.7              | 122.2        | -251.7       | 135.8                   | 11.62                   | 11.35                  | 5.00                  |
| 12,185.0              | 34.64           | 349.83      | 12,157.5              | 139.3        | -254.7       | 153.1                   | 10.45                   | 10.44                  | -1.00                 |
| 12,217.0              | 37.81           | 354.08      | 12,183.4              | 158.0        | -257.3       | 172.0                   | 12.63                   | 9.91                   | 13.28                 |
| 12,248.0              | 41.89           | 359.08      | 12,207.2              | 177.8        | -258.4       | 191.8                   | 16.73                   | 13.16                  | 16.13                 |
| 12,280.0              | 44.66           | 3.06        | 12,230.5              | 199.7        | -258.0       | 213.7                   | 12.15                   | 8.66                   | 12.44                 |
| 12,312.0              | 46.57           | 2.00        | 12,252.8              | 222.6        | -257.0       | 236.4                   | 6.42                    | 5.97                   | -3.31                 |
| 12,343.0              | 47.84           | 0.96        | 12,273.9              | 245.3        | -256.4       | 259.1                   | 4.78                    | 4.10                   | -3.35                 |
| 12,375.0              | 50.87           | 0.45        | 12,294.7              | 269.6        | -256.1       | 283.3                   | 9.55                    | 9.47                   | -1.59                 |
| 12,407.0              | 52.94           | 0.09        | 12,314.5              | 294.8        | -256.0       | 308.5                   | 6.53                    | 6.47                   | -1.13                 |
| 12,438.0              | 54.60           | 359.30      | 12,332.8              | 319.8        | -256.1       | 333.4                   | 5.74                    | 5.35                   | -2.55                 |
| 12,470.0              | 55.08           | 0.96        | 12,351.2              | 346.0        | -256.1       | 359.6                   | 4.50                    | 1.50                   | 5.19                  |
| 12,502.0              | 55.15           | 1.97        | 12,369.5              | 372.2        | -255.4       | 385.7                   | 2.60                    | 0.22                   | 3.16                  |
| 12,534.0              | 56.06           | 1.64        | 12,387.6              | 398.6        | -254.6       | 412.0                   | 2.97                    | 2.84                   | -1.03                 |
| 12,565.0              | 57.87           | 0.74        | 12,404.5              | 424.6        | -254.0       | 437.9                   | 6.33                    | 5.84                   | -2.90                 |
| 12,597.0              | 60.29           | 359.82      | 12,421.0              | 452.0        | -253.9       | 465.3                   | 7.95                    | 7.56                   | -2.88                 |
| 12,629.0              | 62.76           | 359.47      | 12,436.2              | 480.1        | -254.1       | 493.4                   | 7.78                    | 7.72                   | -1.09                 |
| 12,661.0              | 65.60           | 359.97      | 12,450.2              | 508.9        | -254.2       | 522.2                   | 8.99                    | 8.88                   | 1.56                  |
| 12,692.0              | 66.12           | 359.74      | 12,462.8              | 537.2        | -254.3       | 550.4                   | 1.81                    | 1.68                   | -0.74                 |
| 12,724.0              | 65.54           | 359.92      | 12,475.9              | 566.4        | -254.4       | 579.6                   | 1.88                    | -1.81                  | 0.56                  |
| 12,756.0              | 65.75           | 2.57        | 12,489.1              | 595.6        | -253.8       | 608.7                   | 7.57                    | 0.66                   | 8.28                  |
| 12,788.0              | 68.07           | 2.64        | 12,501.7              | 625.0        | -252.4       | 637.9                   | 7.25                    | 7.25                   | 0.22                  |
| 12,819.0              | 71.82           | 2.74        | 12,512.3              | 654.1        | -251.1       | 666.9                   | 12.10                   | 12.10                  | 0.32                  |
| 12,851.0              | 77.12           | 3.35        | 12,520.9              | 684.8        | -249.4       | 697.6                   | 16.66                   | 16.56                  | 1.91                  |
| 12,883.0              | 82.31           | 2.60        | 12,526.6              | 716.3        | -247.8       | 728.8                   | 16.38                   | 16.22                  | -2.34                 |
| 12,914.0              | 87.76           | 3.45        | 12,529.3              | 747.1        | -246.2       | 759.5                   | 17.79                   | 17.58                  | 2.74                  |
| 12,946.0              | 91.31           | 2.69        | 12,529.5              | 779.0        | -244.4       | 791.3                   | 11.35                   | 11.09                  | -2.38                 |
| 13,041.0              | 95.24           | 3.24        | 12,524.1              | 873.7        | -239.5       | 885.6                   | 4.18                    | 4.14                   | 0.58                  |
| 13,144.0              | 92.44           | 2.45        | 12,517.2              | 976.4        | -234.4       | 987.8                   | 2.82                    | -2.72                  | -0.77                 |
| 13,239.0              | 90.73           | 1.60        | 12,514.6              | 1,071.3      | -231.1       | 1,082.4                 | 2.01                    | -1.80                  | -0.89                 |
| 13,335.0              | 93.84           | 2.33        | 12,510.7              | 1,167.1      | -227.8       | 1,177.9                 | 3.33                    | 3.24                   | 0.76                  |
| 13,429.0              | 93.02           | 0.60        | 12,505.1              | 1,260.9      | -225.4       | 1,271.4                 | 2.03                    | -0.87                  | -1.84                 |
| 13,525.0              | 88.32           | 359.72      | 12,504.0              | 1,356.9      | -225.1       | 1,367.2                 | 4.98                    | -4.90                  | -0.92                 |
| 13,619.0              | 88.26           | 357.89      | 12,506.8              | 1,450.8      | -227.1       | 1,461.1                 | 1.95                    | -0.06                  | -1.95                 |
| 13,715.0              | 89.58           | 358.35      | 12,508.6              | 1,546.8      | -230.2       | 1,557.1                 | 1.46                    | 1.38                   | 0.48                  |
| 13,809.0              | 86.98           | 358.83      | 12,511.4              | 1,640.7      | -232.5       | 1,651.0                 | 2.81                    | -2.77                  | 0.51                  |
| 13,905.0              | 90.25           | 359.22      | 12,513.8              | 1,736.6      | -234.2       | 1,746.9                 | 3.43                    | 3.41                   | 0.41                  |
| 14,000.0              | 89.36           | 359.94      | 12,514.1              | 1,831.6      | -234.9       | 1,841.8                 | 1.21                    | -0.94                  | 0.76                  |
| 14,095.0              | 87.28           | 359.92      | 12,516.9              | 1,926.6      | -235.0       | 1,936.6                 | 2.19                    | -2.19                  | -0.02                 |



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### 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 14,190.0              | 90.36           | 1.61        | 12,518.8              | 2,021.5      | -233.7       | 2,031.3                 | 3.70                    | 3.24                   | 1.78                  |
| 14,285.0              | 88.23           | 358.68      | 12,520.0              | 2,116.5      | -233.5       | 2,126.2                 | 3.81                    | -2.24                  | -3.08                 |
| 14,380.0              | 88.23           | 357.17      | 12,522.9              | 2,211.4      | -236.9       | 2,221.1                 | 1.59                    | 0.00                   | -1.59                 |
| 14,476.0              | 89.83           | 358.17      | 12,524.5              | 2,307.3      | -240.8       | 2,317.1                 | 1.97                    | 1.67                   | 1.04                  |
| 14,571.0              | 91.82           | 359.85      | 12,523.2              | 2,402.3      | -242.5       | 2,412.0                 | 2.74                    | 2.09                   | 1.77                  |
| 14,666.0              | 90.14           | 0.04        | 12,521.6              | 2,497.2      | -242.6       | 2,506.8                 | 1.78                    | -1.77                  | 0.20                  |
| 14,761.0              | 89.39           | 0.61        | 12,521.9              | 2,592.2      | -242.0       | 2,601.6                 | 0.99                    | -0.79                  | 0.60                  |
| 14,856.0              | 90.48           | 1.30        | 12,522.1              | 2,687.2      | -240.4       | 2,696.4                 | 1.36                    | 1.15                   | 0.73                  |
| 14,950.0              | 90.67           | 359.81      | 12,521.1              | 2,781.2      | -239.5       | 2,790.2                 | 1.60                    | 0.20                   | -1.59                 |
| 15,046.0              | 91.99           | 0.35        | 12,518.9              | 2,877.2      | -239.4       | 2,886.0                 | 1.49                    | 1.38                   | 0.56                  |
| 15,141.0              | 88.54           | 359.09      | 12,518.4              | 2,972.2      | -239.9       | 2,980.9                 | 3.87                    | -3.63                  | -1.33                 |
| 15,236.0              | 88.80           | 357.55      | 12,520.8              | 3,067.1      | -242.6       | 3,075.8                 | 1.64                    | 0.27                   | -1.62                 |
| 15,331.0              | 89.75           | 357.91      | 12,521.9              | 3,162.0      | -246.4       | 3,170.8                 | 1.07                    | 1.00                   | 0.38                  |
| 15,426.0              | 86.58           | 355.42      | 12,524.9              | 3,256.8      | -251.9       | 3,265.7                 | 4.24                    | -3.34                  | -2.62                 |
| 15,521.0              | 90.73           | 356.69      | 12,527.1              | 3,351.5      | -258.4       | 3,360.7                 | 4.57                    | 4.37                   | 1.34                  |
| 15,616.0              | 90.61           | 358.74      | 12,526.0              | 3,446.4      | -262.2       | 3,455.6                 | 2.16                    | -0.13                  | 2.16                  |
| 15,709.0              | 92.63           | 359.98      | 12,523.4              | 3,539.4      | -263.3       | 3,548.5                 | 2.55                    | 2.17                   | 1.33                  |
| 15,804.0              | 93.14           | 0.90        | 12,518.6              | 3,634.3      | -262.5       | 3,643.2                 | 1.11                    | 0.54                   | 0.97                  |
| 15,899.0              | 90.36           | 1.67        | 12,515.7              | 3,729.2      | -260.4       | 3,737.9                 | 3.04                    | -2.93                  | 0.81                  |
| 15,995.0              | 91.71           | 2.57        | 12,514.0              | 3,825.1      | -256.9       | 3,833.4                 | 1.69                    | 1.41                   | 0.94                  |
| 16,090.0              | 89.86           | 0.39        | 12,512.7              | 3,920.0      | -254.4       | 3,928.1                 | 3.01                    | -1.95                  | -2.29                 |
| 16,185.0              | 90.70           | 1.04        | 12,512.2              | 4,015.0      | -253.2       | 4,022.9                 | 1.12                    | 0.88                   | 0.68                  |
| 16,280.0              | 90.09           | 1.33        | 12,511.5              | 4,110.0      | -251.3       | 4,117.6                 | 0.71                    | -0.64                  | 0.31                  |
| 16,375.0              | 90.81           | 1.59        | 12,510.8              | 4,205.0      | -248.8       | 4,212.3                 | 0.81                    | 0.76                   | 0.27                  |
| 16,470.0              | 91.20           | 0.90        | 12,509.1              | 4,299.9      | -246.8       | 4,307.0                 | 0.83                    | 0.41                   | -0.73                 |
| 16,565.0              | 89.30           | 356.55      | 12,508.7              | 4,394.9      | -248.9       | 4,401.9                 | 5.00                    | -2.00                  | -4.58                 |
| 16,660.0              | 90.39           | 357.18      | 12,509.0              | 4,489.7      | -254.1       | 4,496.9                 | 1.33                    | 1.15                   | 0.66                  |
| 16,756.0              | 92.97           | 359.24      | 12,506.2              | 4,585.6      | -257.1       | 4,592.8                 | 3.44                    | 2.69                   | 2.15                  |
| 16,851.0              | 90.87           | 359.71      | 12,503.0              | 4,680.6      | -258.0       | 4,687.7                 | 2.27                    | -2.21                  | 0.49                  |
| 16,896.0              | 91.85           | 0.06        | 12,501.9              | 4,725.6      | -258.0       | 4,732.6                 | 2.31                    | 2.18                   | 0.78                  |
| 16,956.0              | 91.85           | 0.01        | 12,500.0              | 4,785.5      | -258.0       | 4,792.5                 | 0.09                    | 0.00                   | -0.09                 |

Checked By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Date: \_\_\_\_\_