

30-015-41138

OXY

Eddy County, NM (NAD 27 NME)

Cypress 28 Fed 6H

Cypress 28 Fed 6H

OH

Design: OH

## Standard Survey Report

26 January, 2015

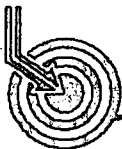
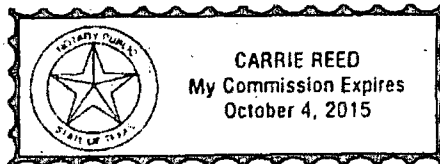
This survey is correct to the best of my knowledge and is supported by actual field data.

*Richard*

Notarized this date 4th of March, 2015.

*Carrie Reed*

Notary Signature  
County of Midland  
State of Texas



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# Survey Report

|           |                              |                              |                        |
|-----------|------------------------------|------------------------------|------------------------|
| Company:  | OXY                          | Local Co-ordinate Reference: | Well Cypress 28 Fed 6H |
| Project:  | Eddy County, NM (NAD 27 NME) | TVD Reference:               | KB @ 3045.8usft        |
| Site:     | Cypress 28 Fed 6H            | MD Reference:                | KB @ 3045.8usft        |
| Well:     | Cypress 28 Fed 6H            | North Reference:             | Grid                   |
| Wellbore: | OH                           | Survey Calculation Method:   | Minimum Curvature      |
| Design:   | OH                           | Database:                    | Midland District       |

|             |                                          |               |                |
|-------------|------------------------------------------|---------------|----------------|
| Project:    | Eddy County, NM (NAD 27 NME), New Mexico |               |                |
| Map System: | US State Plane 1927 (Exact solution)     | System Datum: | Mean Sea Level |
| Geo Datum:  | NAD 1927 (NADCON CONUS)                  |               |                |
| Map Zone:   | New Mexico East 3001                     |               |                |

|                       |                   |                   |                   |
|-----------------------|-------------------|-------------------|-------------------|
| Site:                 | Cypress 28 Fed 6H |                   |                   |
| Site Position:        |                   | Northing:         | 461,885.00 usft   |
| From:                 | Map               | Easting:          | 605,669.20 usft   |
| Position Uncertainty: | 0.0 usft          | Slot Radius:      | 13-3/16 "         |
|                       |                   | Latitude:         | 32° 16' 9.754 N   |
|                       |                   | Longitude:        | 103° 59' 29.244 W |
|                       |                   | Grid Convergence: | 0.18 '            |

|                      |                   |                     |                   |
|----------------------|-------------------|---------------------|-------------------|
| Well:                | Cypress 28 Fed 6H |                     |                   |
| Well Position        | +N/-S             | 0.0 usft            | Northing:         |
|                      | +E/-W             | 0.0 usft            | Easting:          |
| Position Uncertainty | 0.0 usft          | Wellhead Elevation: | 0.0 usft          |
|                      |                   | Latitude:           | 32° 16' 9.754 N   |
|                      |                   | Longitude:          | 103° 59' 29.244 W |
|                      |                   | Ground Level:       | 3,020.8 usft      |

|            |            |             |                |
|------------|------------|-------------|----------------|
| Wellbore:  | OH         |             |                |
| Magnetics: | Model Name | Sample Date | Declination    |
|            | HDGM       | 1/9/2015    | 7.45           |
|            |            |             | Dip Angle      |
|            |            |             | 60.15          |
|            |            |             | Field Strength |
|            |            |             | 48,352         |

|                   |                  |               |           |
|-------------------|------------------|---------------|-----------|
| Design:           | OH               |               |           |
| Audit Notes:      |                  |               |           |
| Version:          | 1.0              | Phase:        | ACTUAL    |
|                   |                  | Tie On Depth: | 0.0       |
| Vertical Section: | Depth From (TVD) | +N/-S         | +E/-W     |
|                   | (usft)           | (usft)        | (usft)    |
|                   | 0.0              | 0.0           | 0.0       |
|                   |                  |               | Direction |
|                   |                  |               | 355.91    |

|                 |                 |                   |                              |
|-----------------|-----------------|-------------------|------------------------------|
| Survey Program: | Date: 1/25/2015 |                   |                              |
| From            | To              | Survey (Wellbore) | Tool Name                    |
| (usft)          | (usft)          |                   |                              |
| 503.0           | 11,425.0        | SDI MWD (OH)      | SDI MWD                      |
|                 |                 |                   | Description                  |
|                 |                 |                   | SDI MWD - Standard ver 1.0.1 |

| 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|------------------------|-----------------------|----------------------|
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.0                     | 0.00                   | 0.00                  | 0.00                 |
| 503.0                 | 0.81            | 129.34      | 503.0                 | -2.3         | 2.7          | -2.4                    | 0.16                   | 0.16                  | 0.00                 |
| 598.0                 | 1.01            | 105.48      | 598.0                 | -2.9         | 4.0          | -3.2                    | 0.46                   | 0.22                  | -25.66               |
| 686.0                 | 0.28            | 212.89      | 686.0                 | -3.3         | 4.7          | -3.6                    | 1.25                   | -0.81                 | 119.34               |
| 776.0                 | 0.74            | 177.21      | 776.0                 | -4.1         | 4.6          | -4.4                    | 0.60                   | 0.51                  | -39.64               |
| 867.0                 | 0.61            | 136.00      | 867.0                 | -5.0         | 5.0          | -5.3                    | 0.54                   | -0.14                 | -45.29               |
| 958.0                 | 1.02            | 253.65      | 958.0                 | -5.6         | 4.5          | -5.9                    | 1.55                   | 0.45                  | 129.29               |
| 1,049.0               | 1.31            | 249.05      | 1,049.0               | -6.2         | 2.8          | -6.3                    | 0.33                   | 0.32                  | -5.05                |
| 1,144.0               | 1.16            | 274.28      | 1,143.9               | -6.5         | 0.8          | -6.5                    | 0.59                   | -0.16                 | 26.56                |
| 1,238.0               | 1.13            | 272.30      | 1,237.9               | -6.4         | -1.1         | -6.3                    | 0.05                   | -0.03                 | -2.11                |

# Survey Report

|           |                               |                              |                        |
|-----------|-------------------------------|------------------------------|------------------------|
| Company:  | OXY                           | Local Co-ordinate Reference: | Well Cypress 28 Fed 6H |
| Project:  | Eddy County, NM (NAD 27, NME) | TVD Reference:               | KB @ 3045.8ush         |
| Site:     | Cypress 28 Fed 6H             | MD Reference:                | KB @ 3045.8ush         |
| Well:     | Cypress 28 Fed 6H             | North Reference:             | Grid                   |
| Wellbore: | OH                            | Survey Calculation Method:   | Minimum Curvature      |
| Design:   | OH                            | Database:                    | Midland District       |

| 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) |
|-----------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|-------------------------|------------------------|-----------------------|
| 1,332.0               | 0.95            | 239.05      | 1,331.9               | -6.7        | -2.7        | -6.5                    | 0.66                    | -0.19                  | -35.37                |
| 1,428.0               | 1.10            | 249.76      | 1,425.9               | -7.4        | -4.2        | -7.1                    | 0.26                    | 0.16                   | 11.39                 |
| 1,520.0               | 1.22            | 252.84      | 1,519.8               | -8.1        | -8.0        | -7.6                    | 0.14                    | 0.13                   | 3.28                  |
| 1,615.0               | 1.38            | 254.64      | 1,614.8               | -8.7        | -8.1        | -8.1                    | 0.17                    | 0.17                   | 1.89                  |
| 1,709.0               | 1.38            | 256.62      | 1,708.8               | -9.2        | -10.2       | -8.5                    | 0.05                    | 0.00                   | 2.11                  |
| 1,803.0               | 1.54            | 256.71      | 1,802.8               | -9.8        | -12.6       | -8.8                    | 0.17                    | 0.17                   | 0.10                  |
| 1,897.0               | 1.63            | 254.40      | 1,896.7               | -10.4       | -15.1       | -9.3                    | 0.12                    | 0.10                   | -2.46                 |
| 1,992.0               | 1.52            | 253.79      | 1,991.7               | -11.1       | -17.6       | -9.9                    | 0.12                    | -0.12                  | -0.64                 |
| 2,086.0               | 0.67            | 277.29      | 2,085.7               | -11.4       | -19.3       | -10.0                   | 1.00                    | -0.90                  | 25.00                 |
| 2,180.0               | 0.30            | 233.69      | 2,179.7               | -11.5       | -20.1       | -10.0                   | 0.53                    | -0.39                  | -46.38                |
| 2,275.0               | 0.60            | 148.38      | 2,274.7               | -12.1       | -20.0       | -10.6                   | 0.68                    | 0.32                   | -89.80                |
| 2,369.0               | 0.78            | 148.35      | 2,368.7               | -13.0       | -19.4       | -11.6                   | 0.19                    | 0.19                   | -0.03                 |
| 2,463.0               | 1.34            | 136.35      | 2,462.6               | -14.4       | -18.3       | -13.0                   | 0.64                    | 0.60                   | -12.77                |
| 2,558.0               | 2.52            | 117.01      | 2,557.6               | -16.1       | -15.7       | -15.0                   | 1.40                    | 1.24                   | -20.36                |
| 2,652.0               | 2.86            | 122.40      | 2,651.5               | -18.3       | -11.9       | -17.4                   | 0.45                    | 0.36                   | 5.73                  |
| 2,748.0               | 1.99            | 138.25      | 2,745.4               | -20.8       | -8.8        | -20.1                   | 1.16                    | -0.93                  | 16.86                 |
| 2,841.0               | 1.74            | 141.35      | 2,840.4               | -23.1       | -6.8        | -22.6                   | 0.28                    | -0.26                  | 3.26                  |
| 2,966.0               | 1.29            | 138.38      | 2,965.3               | -25.7       | -4.7        | -25.3                   | 0.37                    | -0.36                  | -2.38                 |
| 3,118.0               | 1.14            | 129.73      | 3,115.3               | -27.9       | -2.4        | -27.6                   | 0.16                    | -0.10                  | -5.77                 |
| 3,211.0               | 1.28            | 130.91      | 3,210.3               | -29.2       | -0.9        | -29.1                   | 0.15                    | 0.15                   | 1.24                  |
| 3,305.0               | 0.64            | 127.91      | 3,304.2               | -30.2       | 0.3         | -30.1                   | 0.68                    | -0.68                  | -3.19                 |
| 3,399.0               | 0.78            | 118.32      | 3,398.2               | -30.8       | 1.3         | -30.8                   | 0.19                    | 0.15                   | -10.20                |
| 3,493.0               | 0.58            | 107.83      | 3,492.2               | -31.3       | 2.3         | -31.4                   | 0.25                    | -0.21                  | -11.16                |
| 3,587.0               | 1.23            | 152.12      | 3,586.2               | -32.3       | 3.2         | -32.5                   | 0.97                    | 0.69                   | 47.12                 |
| 3,681.0               | 2.68            | 161.77      | 3,680.2               | -35.3       | 4.4         | -35.5                   | 1.58                    | 1.54                   | 10.27                 |
| 3,776.0               | 4.21            | 167.46      | 3,775.0               | -40.8       | 5.8         | -41.1                   | 1.65                    | 1.61                   | 5.99                  |
| 3,870.0               | 5.81            | 173.10      | 3,868.6               | -48.9       | 7.1         | -49.3                   | 1.78                    | 1.70                   | 6.00                  |
| 3,964.0               | 7.05            | 175.65      | 3,962.0               | -59.4       | 8.2         | -59.8                   | 1.35                    | 1.32                   | 2.71                  |
| 4,058.0               | 8.54            | 176.07      | 4,055.2               | -72.1       | 9.1         | -72.6                   | 1.59                    | 1.59                   | 0.45                  |
| 4,152.0               | 8.79            | 175.62      | 4,148.1               | -86.2       | 10.1        | -86.7                   | 0.28                    | 0.27                   | -0.48                 |
| 4,247.0               | 9.86            | 176.25      | 4,241.8               | -101.6      | 11.2        | -102.1                  | 1.13                    | 1.13                   | 0.66                  |
| 4,341.0               | 9.42            | 176.70      | 4,334.5               | -117.3      | 12.2        | -117.8                  | 0.47                    | -0.47                  | 0.48                  |
| 4,435.0               | 8.81            | 176.64      | 4,427.3               | -132.1      | 13.0        | -132.7                  | 0.65                    | -0.65                  | -0.06                 |
| 4,529.0               | 8.22            | 177.10      | 4,520.3               | -146.0      | 13.8        | -146.7                  | 0.63                    | -0.63                  | 0.49                  |
| 4,624.0               | 8.92            | 174.58      | 4,614.2               | -160.2      | 14.8        | -160.8                  | 0.84                    | 0.74                   | -2.85                 |
| 4,718.0               | 8.84            | 174.73      | 4,707.1               | -174.6      | 16.2        | -175.3                  | 0.09                    | -0.09                  | 0.16                  |
| 4,812.0               | 8.99            | 174.29      | 4,800.0               | -189.1      | 17.6        | -189.9                  | 0.18                    | 0.16                   | -0.47                 |
| 4,906.0               | 8.85            | 174.21      | 4,892.8               | -203.6      | 19.0        | -204.4                  | 0.15                    | -0.15                  | -0.09                 |
| 5,000.0               | 8.52            | 173.08      | 4,985.7               | -217.7      | 20.6        | -218.6                  | 0.40                    | -0.35                  | -1.20                 |
| 5,094.0               | 7.81            | 173.27      | 5,078.8               | -231.0      | 22.2        | -232.0                  | 0.76                    | -0.76                  | 0.20                  |
| 5,189.0               | 7.28            | 174.22      | 5,173.0               | -243.4      | 23.5        | -244.4                  | 0.57                    | -0.56                  | 1.00                  |
| 5,283.0               | 7.01            | 175.58      | 5,266.2               | -255.0      | 24.6        | -256.1                  | 0.34                    | -0.29                  | 1.45                  |
| 5,377.0               | 5.13            | 180.88      | 5,359.7               | -264.9      | 25.0        | -266.0                  | 2.08                    | -2.00                  | 5.64                  |
| 5,471.0               | 2.79            | 178.28      | 5,453.5               | -271.4      | 25.0        | -272.5                  | 2.50                    | -2.49                  | -2.77                 |

# Survey Report

|           |                               |                              |                        |
|-----------|-------------------------------|------------------------------|------------------------|
| Company:  | OXY                           | Local Co-ordinate Reference: | Well Cypress 28 Fed 6H |
| Project:  | Eddy County, NM (NAD 27, NME) | TVD Reference:               | KB @ 3045.8usft        |
| Site:     | Cypress 28 Fed 6H             | MD Reference:                | KB @ 3045.8usft        |
| Well:     | Cypress 28 Fed 6H             | North Reference:             | Grid                   |
| Wellbore: | OH                            | Survey Calculation Method:   | Minimum Curvature      |
| Design:   | OH                            | Database:                    | Midland District       |

| Survey                      |                    |                |                             |               |               |                               |                               |                              |                             |  |
|-----------------------------|--------------------|----------------|-----------------------------|---------------|---------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|--|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |  |
| 5,566.0                     | 0.42               | 200.96         | 5,548.4                     | -274.1        | 24.9          | -275.1                        | 2.53                          | -2.49                        | 23.87                       |  |
| 5,660.0                     | 0.45               | 281.55         | 5,642.4                     | -274.3        | 24.4          | -275.4                        | 0.60                          | 0.03                         | 85.73                       |  |
| 5,754.0                     | 0.45               | 271.68         | 5,736.4                     | -274.2        | 23.7          | -275.2                        | 0.08                          | 0.00                         | -10.50                      |  |
| 5,849.0                     | 0.28               | 301.52         | 5,831.4                     | -274.1        | 23.1          | -275.0                        | 0.26                          | -0.18                        | 31.41                       |  |
| 5,933.0                     | 0.31               | 294.54         | 5,915.4                     | -273.9        | 22.7          | -274.8                        | 0.06                          | 0.04                         | -8.31                       |  |
| 6,047.0                     | 5.83               | 5.49           | 6,029.2                     | -268.0        | 23.0          | -269.0                        | 5.03                          | 4.84                         | 62.24                       |  |
| 6,136.0                     | 16.11              | 5.13           | 6,118.5                     | -251.2        | 24.6          | -252.3                        | 11.55                         | 11.55                        | -0.40                       |  |
| 6,227.0                     | 25.58              | 354.09         | 6,201.5                     | -219.0        | 23.7          | -220.1                        | 11.22                         | 10.41                        | -12.13                      |  |
| 6,320.0                     | 33.36              | 356.63         | 6,282.4                     | -173.4        | 20.1          | -174.4                        | 8.47                          | 8.37                         | 2.73                        |  |
| 6,410.0                     | 41.59              | 355.64         | 6,353.7                     | -118.8        | 16.4          | -119.7                        | 9.17                          | 9.14                         | -1.10                       |  |
| 6,501.0                     | 49.07              | 354.27         | 6,417.7                     | -54.4         | 10.6          | -55.0                         | 8.29                          | 8.22                         | -1.51                       |  |
| 6,595.0                     | 55.98              | 356.12         | 6,474.6                     | 19.9          | 4.4           | 19.5                          | 7.51                          | 7.35                         | 1.97                        |  |
| 6,690.0                     | 62.59              | 359.82         | 6,523.3                     | 101.5         | 1.6           | 101.1                         | 7.72                          | 6.96                         | 3.69                        |  |
| 6,784.0                     | 70.55              | 359.92         | 6,560.7                     | 187.6         | 1.4           | 187.1                         | 8.47                          | 8.47                         | 0.11                        |  |
| 6,878.0                     | 81.32              | 356.56         | 6,583.5                     | 278.6         | -1.4          | 278.0                         | 11.97                         | 11.46                        | -3.57                       |  |
| 6,972.0                     | 85.57              | 355.50         | 6,594.2                     | 371.8         | -7.9          | 371.4                         | 4.66                          | 4.52                         | -1.13                       |  |
| 7,066.0                     | 90.27              | 352.98         | 6,597.6                     | 465.2         | -17.3         | 465.2                         | 5.67                          | 5.00                         | -2.68                       |  |
| 7,161.0                     | 90.03              | 352.00         | 6,597.4                     | 559.4         | -29.7         | 560.1                         | 1.06                          | -0.25                        | -1.03                       |  |
| 7,255.0                     | 90.40              | 352.00         | 6,597.0                     | 652.5         | -42.8         | 653.9                         | 0.39                          | 0.39                         | 0.00                        |  |
| 7,349.0                     | 89.60              | 355.14         | 6,596.9                     | 745.9         | -53.3         | 747.8                         | 3.40                          | -0.64                        | 3.34                        |  |
| 7,443.0                     | 89.93              | 355.48         | 6,597.1                     | 839.5         | -61.0         | 841.8                         | 0.39                          | 0.14                         | 0.36                        |  |
| 7,538.0                     | 89.83              | 355.05         | 6,597.3                     | 934.2         | -68.9         | 936.8                         | 0.46                          | -0.11                        | -0.45                       |  |
| 7,632.0                     | 88.99              | 354.16         | 6,598.3                     | 1,027.8       | -77.7         | 1,030.7                       | 1.30                          | -0.89                        | -0.95                       |  |
| 7,726.0                     | 90.71              | 357.15         | 6,598.5                     | 1,121.5       | -84.8         | 1,124.7                       | 3.67                          | 1.83                         | 3.18                        |  |
| 7,820.0                     | 91.01              | 356.67         | 6,597.1                     | 1,215.4       | -89.9         | 1,218.7                       | 0.60                          | 0.32                         | -0.51                       |  |
| 7,914.0                     | 92.18              | 355.39         | 6,594.5                     | 1,309.1       | -96.4         | 1,312.6                       | 1.84                          | 1.24                         | -1.36                       |  |
| 8,009.0                     | 90.37              | 355.43         | 6,592.4                     | 1,403.8       | -104.0        | 1,407.6                       | 1.91                          | -1.91                        | 0.04                        |  |
| 8,103.0                     | 89.06              | 357.05         | 6,592.8                     | 1,497.6       | -110.2        | 1,501.6                       | 2.22                          | -1.39                        | 1.72                        |  |
| 8,197.0                     | 89.90              | 356.73         | 6,593.7                     | 1,591.4       | -115.3        | 1,595.6                       | 0.96                          | 0.89                         | -0.34                       |  |
| 8,291.0                     | 92.05              | 357.49         | 6,592.1                     | 1,685.3       | -120.0        | 1,689.5                       | 2.43                          | 2.29                         | 0.81                        |  |
| 8,385.0                     | 92.82              | 357.30         | 6,588.0                     | 1,779.1       | -124.3        | 1,783.4                       | 0.95                          | 0.93                         | -0.20                       |  |
| 8,479.0                     | 90.97              | 356.03         | 6,584.8                     | 1,872.9       | -129.7        | 1,877.4                       | 2.48                          | -2.07                        | -1.35                       |  |
| 8,574.0                     | 89.13              | 359.40         | 6,584.7                     | 1,967.7       | -136.0        | 1,972.3                       | 1.98                          | -1.94                        | 0.39                        |  |
| 8,668.0                     | 90.84              | 357.06         | 6,584.7                     | 2,061.5       | -141.4        | 2,066.3                       | 2.05                          | 1.93                         | 0.70                        |  |
| 8,762.0                     | 88.39              | 355.66         | 6,585.2                     | 2,155.3       | -147.3        | 2,160.3                       | 3.09                          | -2.71                        | -1.49                       |  |
| 8,870.0                     | 89.30              | 355.88         | 6,587.4                     | 2,263.0       | -155.3        | 2,268.3                       | 0.87                          | 0.84                         | 0.20                        |  |
| 8,984.0                     | 88.69              | 352.79         | 6,589.0                     | 2,356.5       | -164.6        | 2,362.2                       | 3.35                          | -0.65                        | -3.29                       |  |
| 9,058.0                     | 91.48              | 355.94         | 6,586.9                     | 2,450.0       | -173.8        | 2,456.2                       | 4.48                          | 2.97                         | 3.35                        |  |
| 9,153.0                     | 90.37              | 352.62         | 6,587.4                     | 2,544.5       | -183.3        | 2,551.1                       | 3.68                          | -1.17                        | -3.49                       |  |
| 9,247.0                     | 91.51              | 356.10         | 6,585.8                     | 2,638.0       | -192.5        | 2,645.1                       | 3.90                          | 1.21                         | 3.70                        |  |
| 9,341.0                     | 90.13              | 354.51         | 6,584.5                     | 2,731.7       | -200.2        | 2,739.0                       | 2.24                          | -1.47                        | -1.69                       |  |
| 9,435.0                     | 89.13              | 356.32         | 6,585.1                     | 2,825.4       | -207.7        | 2,833.0                       | 2.20                          | -1.06                        | 1.93                        |  |
| 9,530.0                     | 88.62              | 358.42         | 6,587.0                     | 2,920.3       | -212.1        | 2,928.0                       | 2.27                          | -0.54                        | 2.21                        |  |

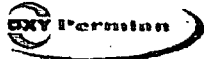
# Survey Report

|           |                               |                              |                        |
|-----------|-------------------------------|------------------------------|------------------------|
| Company:  | OXY                           | Local Co-ordinate Reference: | Well Cypress 28 Fed 6H |
| Project:  | Eddy County, NM (NAD 27, NME) | TVD Reference:               | KB @ 3045.8usft        |
| Site:     | Cypress 28 Fed 6H             | MD Reference:                | KB @ 3045.8usft        |
| Well:     | Cypress 28 Fed 6H             | North Reference:             | Grid                   |
| Wellbore: | OH                            | Survey Calculation Method:   | Minimum Curvature      |
| Design:   | OH                            | Database:                    | Midland District       |

| Measured<br>Depth<br>(usft)       | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | N-S<br>(usft) | E-W<br>(usft) | Vertical<br>Section<br>(usft) | Dogleg<br>Rate<br>(°/100usft) | Build<br>Rate<br>(°/100usft) | Turn<br>Rate<br>(°/100usft) |
|-----------------------------------|--------------------|----------------|-----------------------------|---------------|---------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|
| 9,624.0                           | 80.17              | 358.46         | 6,588.0                     | 3,014.2       | -214.6        | 3,021.9                       | 1.65                          | 1.65                         | 0.04                        |
| 9,718.0                           | 92.73              | 358.63         | 6,585.6                     | 3,108.2       | -217.0        | 3,115.7                       | 2.73                          | 2.72                         | 0.18                        |
| 9,813.0                           | 90.10              | 358.89         | 6,583.2                     | 3,203.1       | -219.1        | 3,210.6                       | 2.78                          | -2.77                        | 0.27                        |
| 9,907.0                           | 89.80              | 359.13         | 6,583.3                     | 3,297.1       | -220.7        | 3,304.4                       | 0.41                          | -0.32                        | 0.26                        |
| 10,001.0                          | 90.67              | 358.22         | 6,582.9                     | 3,391.1       | -222.9        | 3,398.3                       | 1.34                          | 0.93                         | -0.97                       |
| 10,095.0                          | 88.39              | 356.13         | 6,583.7                     | 3,484.9       | -227.5        | 3,492.3                       | 3.29                          | -2.43                        | -2.22                       |
| 10,190.0                          | 90.47              | 356.89         | 6,584.6                     | 3,579.8       | -233.3        | 3,587.3                       | 2.33                          | 2.19                         | 0.80                        |
| 10,284.0                          | 90.13              | 356.36         | 6,584.1                     | 3,673.6       | -238.8        | 3,681.3                       | 0.67                          | -0.36                        | -0.56                       |
| 10,378.0                          | 91.21              | 357.44         | 6,583.0                     | 3,767.4       | -243.9        | 3,775.2                       | 1.62                          | 1.15                         | 1.15                        |
| 10,472.0                          | 90.17              | 357.34         | 6,581.9                     | 3,861.3       | -248.2        | 3,869.2                       | 1.11                          | -1.11                        | -0.11                       |
| 10,567.0                          | 90.21              | 357.01         | 6,581.6                     | 3,956.2       | -252.9        | 3,964.2                       | 0.35                          | 0.04                         | -0.35                       |
| 10,661.0                          | 90.17              | 354.52         | 6,581.3                     | 4,050.0       | -259.8        | 4,058.2                       | 2.65                          | -0.04                        | -2.65                       |
| 10,755.0                          | 88.05              | 353.40         | 6,582.7                     | 4,143.4       | -269.7        | 4,152.1                       | 2.55                          | -2.26                        | -1.19                       |
| 10,849.0                          | 91.25              | 354.98         | 6,583.3                     | 4,236.9       | -279.2        | 4,246.0                       | 3.80                          | 3.40                         | 1.68                        |
| 10,944.0                          | 89.26              | 354.17         | 6,582.9                     | 4,331.5       | -288.2        | 4,341.0                       | 2.26                          | -2.09                        | -0.85                       |
| 11,038.0                          | 91.68              | 353.92         | 6,582.1                     | 4,425.0       | -297.9        | 4,434.9                       | 2.59                          | 2.57                         | -0.27                       |
| 11,132.0                          | 89.16              | 353.44         | 6,581.4                     | 4,518.4       | -308.3        | 4,528.9                       | 2.73                          | -2.68                        | -0.51                       |
| 11,226.0                          | 90.20              | 353.61         | 6,582.0                     | 4,611.8       | -318.9        | 4,622.8                       | 1.12                          | 1.11                         | 0.18                        |
| 11,275.1                          | 91.57              | 354.10         | 6,581.2                     | 4,660.6       | -324.1        | 4,671.9                       | 2.97                          | 2.80                         | 1.00                        |
| C28 F6H LTP                       |                    |                |                             |               |               |                               |                               |                              |                             |
| 11,320.0                          | 92.83              | 354.55         | 6,579.5                     | 4,705.2       | -328.6        | 4,716.7                       | 2.97                          | 2.80                         | 1.00                        |
| 11,374.0                          | 93.00              | 354.28         | 6,576.7                     | 4,758.9       | -333.8        | 4,770.6                       | 0.59                          | 0.31                         | -0.50                       |
| MWD Survey                        |                    |                |                             |               |               |                               |                               |                              |                             |
| 11,425.0                          | 93.00              | 354.28         | 6,574.1                     | 4,809.6       | -338.9        | 4,821.5                       | 0.00                          | 0.00                         | 0.00                        |
| Projection to BH/VD - C28 F6H BHL |                    |                |                             |               |               |                               |                               |                              |                             |

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates<br>N-S<br>(usft) | E-W<br>(usft) | Comment             |
|-----------------------------|-----------------------------|------------------------------------|---------------|---------------------|
| 11,374.0                    | 6,576.7                     | 4,758.9                            | -333.8        | MWD Survey          |
| 11,425.0                    | 6,574.1                     | 4,809.6                            | -338.9        | Projection to BH/VD |

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



Cypress 28 Fed 6H  
Eddy County, NM (NAD 27 NME)  
Northing: 461885.00  
Easting: 605669.20  
Plan #1



Azimuths to Grid North  
True North: -0.18°  
Magnetic North: 7.27°

Magnetic Field  
Strength: 48362.2nT  
Dip Angle: 60.15°  
Date: 1/8/2015  
Model: HDGM

To convert Magnetic North to Grid, Add 7.27°  
To convert True North to Grid, Subtract 0.18°



KB @ 3045.8usf/in  
Gr @ 3020.8

