

**LEAM Drilling Systems LLC**  
Survey Report

30-025-42087

HOBBS OCD

|           |                     |                              |                                 |
|-----------|---------------------|------------------------------|---------------------------------|
| Company:  | EOG Resources       | Local Co-ordinate Reference: | Well #401                       |
| Project:  | Lea County, NM      | TVD Reference:               | GE 3488' + KB 30' @ 3518.00usft |
| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

|             |                                      |               |                |
|-------------|--------------------------------------|---------------|----------------|
| Project     | Lea County, NM                       |               |                |
| 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                  | Hearns 27 State Com |                   |                   |
| Site Position:        |                     | Northing:         | 430,806.00 usft   |
| From:                 | Map                 | Easting:          | 738,830.00 usft   |
| Position Uncertainty: | 0.00 usft           | Slot Radius:      | 13-3/16 "         |
|                       |                     | Latitude:         | 32° 10' 55.369 N  |
|                       |                     | Longitude:        | 103° 33' 40.975 W |
|                       |                     | Grid Convergence: | 0.41 °            |

|                      |           |                     |                           |
|----------------------|-----------|---------------------|---------------------------|
| Well                 | #401      |                     |                           |
| Well Position        | +N/-S     | 0.00 usft           | Northing: 430,806.00 usft |
|                      | +E/-W     | 0.00 usft           | Easting: 738,830.00 usft  |
| Position Uncertainty | 0.00 usft | Wellhead Elevation: | 0.00 usft                 |
|                      |           | Latitude:           | 32° 10' 55.369 N          |
|                      |           | Longitude:          | 103° 33' 40.975 W         |
|                      |           | Ground Level:       | 3,488.00 usft             |

|           |            |             |                 |               |                     |
|-----------|------------|-------------|-----------------|---------------|---------------------|
| Wellbore  | OH         |             |                 |               |                     |
| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|           | BGGM2014   | 3/10/2015   | 7.29            | 60.05         | 48,168              |

|                   |                         |              |              |               |      |
|-------------------|-------------------------|--------------|--------------|---------------|------|
| Design            | OH                      |              |              |               |      |
| Audit Notes:      |                         |              |              |               |      |
| Version:          | 1.0                     | Phase:       | ACTUAL       | Tie On Depth: | 0.00 |
| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |      |
|                   | 0.00                    | 0.00         | 0.00         | 186.41        |      |

|                |                |                   |               |                 |  |
|----------------|----------------|-------------------|---------------|-----------------|--|
| Survey Program | Date 3/27/2015 |                   |               |                 |  |
| From (usft)    | To (usft)      | Survey (Wellbore) | Tool Name     | Description     |  |
| 212.00         | 15,599.00      | Survey #1 (OH)    | LEAM_MWD+HDGM | LEAM MWD + HDGM |  |
| 15,660.00      | 15,660.00      | Survey #2 (OH)    | Project       | Projection      |  |

|                       |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| 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) |  |
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 0.00                    | 0.00                    | 0.00                   | 0.00                  |  |
| 212.00                | 1.00            | 66.50       | 211.99                | 0.74         | 1.70         | -0.92                   | 0.47                    | 0.47                   | 0.00                  |  |
| 394.00                | 0.60            | 93.70       | 393.97                | 1.31         | 4.10         | -1.76                   | 0.30                    | -0.22                  | 14.95                 |  |
| 517.00                | 1.00            | 108.50      | 516.96                | 0.93         | 5.76         | -1.57                   | 0.36                    | 0.33                   | 12.03                 |  |
| 699.00                | 0.40            | 118.30      | 698.95                | 0.12         | 7.83         | -1.00                   | 0.33                    | -0.33                  | 5.38                  |  |
| 879.00                | 0.50            | 173.30      | 878.94                | -0.96        | 8.47         | 0.00                    | 0.24                    | 0.06                   | 30.56                 |  |
| 1,061.00              | 0.80            | 201.10      | 1,060.93              | -2.93        | 8.11         | 2.01                    | 0.23                    | 0.16                   | 15.27                 |  |
| 1,213.00              | 1.30            | 207.10      | 1,212.90              | -5.45        | 6.94         | 4.65                    | 0.34                    | 0.33                   | 3.95                  |  |
| 1,354.00              | 1.30            | 229.40      | 1,353.87              | -7.92        | 5.00         | 7.31                    | 0.36                    | 0.00                   | 15.82                 |  |
| 1,544.00              | 1.50            | 225.20      | 1,543.81              | -11.07       | 1.60         | 10.83                   | 0.12                    | 0.11                   | -2.21                 |  |

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| Project:  | Lea County, NM      | TVD Reference:               | GE 3488' + KB 30' @ 3518.00usft |
| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

| 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) |
| 1,734.00              | 1.70            | 235.70      | 1,733.74              | -14.41       | -2.49        | 14.60                   | 0.19                    | 0.11                   | 5.53                  |
| 1,923.00              | 1.80            | 238.70      | 1,922.65              | -17.54       | -7.35        | 18.25                   | 0.07                    | 0.05                   | 1.59                  |
| 2,113.00              | 1.80            | 237.50      | 2,112.56              | -20.69       | -12.41       | 21.95                   | 0.02                    | 0.00                   | -0.63                 |
| 2,304.00              | 1.80            | 241.40      | 2,303.46              | -23.74       | -17.58       | 25.55                   | 0.06                    | 0.00                   | 2.04                  |
| 2,494.00              | 1.80            | 245.90      | 2,493.37              | -26.38       | -22.92       | 28.78                   | 0.07                    | 0.00                   | 2.37                  |
| 2,683.00              | 1.80            | 251.40      | 2,682.27              | -28.54       | -28.44       | 31.54                   | 0.09                    | 0.00                   | 2.91                  |
| 2,873.00              | 1.80            | 262.10      | 2,872.18              | -29.91       | -34.23       | 33.54                   | 0.18                    | 0.00                   | 5.63                  |
| 3,063.00              | 1.30            | 275.30      | 3,062.11              | -30.12       | -39.33       | 34.32                   | 0.32                    | -0.26                  | 6.95                  |
| 3,252.00              | 1.00            | 280.60      | 3,251.07              | -29.62       | -43.08       | 34.24                   | 0.17                    | -0.16                  | 2.80                  |
| 3,442.00              | 0.70            | 171.40      | 3,441.06              | -30.46       | -44.54       | 35.24                   | 0.74                    | -0.16                  | -57.47                |
| 3,632.00              | 1.00            | 106.00      | 3,631.04              | -32.06       | -42.77       | 36.64                   | 0.50                    | 0.16                   | -34.42                |
| 3,823.00              | 0.80            | 80.00       | 3,822.02              | -32.29       | -39.86       | 36.54                   | 0.24                    | -0.10                  | -13.61                |
| 4,014.00              | 0.70            | 87.20       | 4,013.00              | -32.00       | -37.38       | 35.97                   | 0.07                    | -0.05                  | 3.77                  |
| 4,203.00              | 0.80            | 79.70       | 4,201.99              | -31.71       | -34.93       | 35.41                   | 0.07                    | 0.05                   | -3.97                 |
| 4,392.00              | 1.80            | 163.30      | 4,390.95              | -34.32       | -32.78       | 37.76                   | 1.00                    | 0.53                   | 44.23                 |
| 4,583.00              | 2.90            | 128.00      | 4,581.80              | -40.17       | -28.11       | 43.05                   | 0.93                    | 0.58                   | -18.48                |
| 4,773.00              | 1.70            | 134.00      | 4,771.64              | -45.08       | -22.29       | 47.29                   | 0.64                    | -0.63                  | 3.16                  |
| 4,964.00              | 2.00            | 103.70      | 4,962.54              | -47.84       | -17.02       | 49.44                   | 0.53                    | 0.16                   | -15.86                |
| 5,041.00              | 1.80            | 103.70      | 5,039.50              | -48.44       | -14.54       | 49.76                   | 0.26                    | -0.26                  | 0.00                  |
| 5,239.00              | 1.40            | 21.30       | 5,237.45              | -46.93       | -10.64       | 47.82                   | 1.08                    | -0.20                  | -41.62                |
| 5,430.00              | 4.10            | 265.30      | 5,428.29              | -45.31       | -16.60       | 46.88                   | 2.55                    | 1.41                   | -60.73                |
| 5,620.00              | 5.90            | 267.60      | 5,617.56              | -46.28       | -33.12       | 49.69                   | 0.95                    | 0.95                   | 1.21                  |
| 5,810.00              | 6.10            | 267.40      | 5,806.52              | -47.14       | -52.97       | 52.76                   | 0.11                    | 0.11                   | -0.11                 |
| 5,999.00              | 6.20            | 267.40      | 5,994.43              | -48.06       | -73.19       | 55.93                   | 0.05                    | 0.05                   | 0.00                  |
| 6,189.00              | 7.80            | 276.50      | 6,183.01              | -47.07       | -96.25       | 57.52                   | 1.02                    | 0.84                   | 4.79                  |
| 6,379.00              | 8.40            | 276.70      | 6,371.12              | -43.99       | -122.85      | 57.43                   | 0.32                    | 0.32                   | 0.11                  |
| 6,569.00              | 8.20            | 275.80      | 6,559.13              | -41.00       | -150.11      | 57.50                   | 0.13                    | -0.11                  | -0.47                 |
| 6,759.00              | 8.40            | 275.80      | 6,747.14              | -38.23       | -177.40      | 57.80                   | 0.11                    | 0.11                   | 0.00                  |
| 6,950.00              | 8.30            | 276.70      | 6,936.11              | -35.21       | -204.97      | 57.87                   | 0.09                    | -0.05                  | 0.47                  |
| 7,139.00              | 7.90            | 277.90      | 7,123.23              | -31.83       | -231.38      | 57.47                   | 0.23                    | -0.21                  | 0.63                  |
| 7,329.00              | 7.70            | 278.60      | 7,311.47              | -28.14       | -256.90      | 56.64                   | 0.12                    | -0.11                  | 0.37                  |
| 7,511.00              | 8.60            | 283.40      | 7,491.63              | -23.16       | -282.20      | 54.52                   | 0.62                    | 0.49                   | 2.64                  |
| 7,606.00              | 9.70            | 286.50      | 7,585.42              | -19.24       | -296.78      | 52.25                   | 1.27                    | 1.16                   | 3.26                  |
| 7,700.00              | 8.70            | 284.60      | 7,678.21              | -15.20       | -311.25      | 49.85                   | 1.11                    | -1.06                  | -2.02                 |
| 7,890.00              | 7.50            | 285.00      | 7,866.31              | -8.37        | -337.14      | 45.95                   | 0.63                    | -0.63                  | 0.21                  |
| 8,079.00              | 7.00            | 287.10      | 8,053.80              | -1.79        | -360.06      | 41.98                   | 0.30                    | -0.26                  | 1.11                  |
| 8,268.00              | 8.40            | 282.50      | 8,241.09              | 4.59         | -384.55      | 38.37                   | 0.81                    | 0.74                   | -2.43                 |
| 8,363.00              | 9.10            | 282.50      | 8,334.99              | 7.71         | -398.66      | 36.84                   | 0.74                    | 0.74                   | 0.00                  |
| 8,458.00              | 8.40            | 283.00      | 8,428.88              | 10.90        | -412.75      | 35.25                   | 0.74                    | -0.74                  | 0.53                  |
| 8,649.00              | 8.10            | 273.90      | 8,617.91              | 14.95        | -439.77      | 34.24                   | 0.70                    | -0.16                  | -4.76                 |
| 8,838.00              | 5.80            | 263.30      | 8,805.52              | 14.75        | -462.54      | 36.99                   | 1.39                    | -1.22                  | -5.61                 |
| 8,934.00              | 5.50            | 261.40      | 8,901.05              | 13.49        | -471.91      | 39.28                   | 0.37                    | -0.31                  | -1.98                 |
| 9,029.00              | 4.80            | 256.00      | 8,995.67              | 11.85        | -480.27      | 41.84                   | 0.90                    | -0.74                  | -5.68                 |

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|           |                     |                              |                                 |
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| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

| 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 9,124.00              | 4.00            | 248.80      | 9,090.39              | 9.69         | -487.21      | 44.76                   | 1.02                    | -0.84                  | -7.58                 |
| 9,219.00              | 3.80            | 251.20      | 9,185.17              | 7.48         | -493.28      | 47.64                   | 0.27                    | -0.21                  | 2.53                  |
| 9,314.00              | 3.50            | 247.90      | 9,279.98              | 5.37         | -498.95      | 50.37                   | 0.39                    | -0.32                  | -3.47                 |
| 9,409.00              | 3.40            | 249.10      | 9,374.80              | 3.28         | -504.27      | 53.04                   | 0.13                    | -0.11                  | 1.26                  |
| 9,504.00              | 3.50            | 233.30      | 9,469.63              | 0.54         | -509.23      | 56.32                   | 1.00                    | 0.11                   | -16.63                |
| 9,599.00              | 3.20            | 232.20      | 9,564.47              | -2.82        | -513.65      | 60.15                   | 0.32                    | -0.32                  | -1.16                 |
| 9,693.00              | 1.90            | 214.70      | 9,658.38              | -5.71        | -516.61      | 63.35                   | 1.60                    | -1.38                  | -18.62                |
| 9,788.00              | 0.80            | 206.70      | 9,753.35              | -7.60        | -517.80      | 65.36                   | 1.17                    | -1.16                  | -8.42                 |
| 9,940.00              | 1.40            | 72.40       | 9,905.34              | -7.98        | -516.51      | 65.60                   | 1.34                    | 0.39                   | -88.36                |
| 9,983.00              | 1.40            | 77.40       | 9,948.32              | -7.71        | -515.49      | 65.21                   | 0.28                    | 0.00                   | 11.63                 |
| 10,030.00             | 3.40            | 144.00      | 9,995.29              | -8.71        | -514.11      | 66.05                   | 6.64                    | 4.26                   | 141.70                |
| 10,077.00             | 7.60            | 166.80      | 10,042.06             | -12.87       | -512.58      | 70.01                   | 9.90                    | 8.94                   | 48.51                 |
| 10,124.00             | 13.40           | 179.80      | 10,088.26             | -21.35       | -511.86      | 78.36                   | 13.25                   | 12.34                  | 27.66                 |
| 10,172.00             | 17.30           | 188.10      | 10,134.55             | -33.98       | -512.84      | 91.03                   | 9.31                    | 8.13                   | 17.29                 |
| 10,219.00             | 22.90           | 189.70      | 10,178.67             | -49.93       | -515.37      | 107.15                  | 11.97                   | 11.91                  | 3.40                  |
| 10,266.00             | 27.00           | 188.50      | 10,221.27             | -69.50       | -518.49      | 126.95                  | 8.79                    | 8.72                   | -2.55                 |
| 10,314.00             | 32.10           | 189.20      | 10,263.01             | -92.88       | -522.14      | 150.59                  | 10.65                   | 10.63                  | 1.46                  |
| 10,361.00             | 36.10           | 189.30      | 10,301.93             | -118.88      | -526.38      | 176.91                  | 8.51                    | 8.51                   | 0.21                  |
| 10,409.00             | 41.70           | 190.40      | 10,339.27             | -148.57      | -531.55      | 206.98                  | 11.75                   | 11.67                  | 2.29                  |
| 10,456.00             | 47.10           | 191.10      | 10,372.84             | -180.86      | -537.69      | 239.76                  | 11.54                   | 11.49                  | 1.49                  |
| 10,504.00             | 54.60           | 192.20      | 10,403.12             | -217.29      | -545.22      | 276.80                  | 15.73                   | 15.63                  | 2.29                  |
| 10,551.00             | 58.90           | 191.30      | 10,428.88             | -255.76      | -553.21      | 315.92                  | 9.29                    | 9.15                   | -1.91                 |
| 10,599.00             | 64.10           | 192.00      | 10,451.78             | -297.06      | -561.73      | 357.91                  | 10.91                   | 10.83                  | 1.46                  |
| 10,646.00             | 67.50           | 190.40      | 10,471.04             | -339.10      | -570.05      | 400.63                  | 7.87                    | 7.23                   | -3.40                 |
| 10,694.00             | 68.70           | 190.20      | 10,488.95             | -382.92      | -578.01      | 445.06                  | 2.53                    | 2.50                   | -0.42                 |
| 10,742.00             | 71.60           | 187.80      | 10,505.25             | -427.51      | -585.07      | 490.15                  | 7.66                    | 6.04                   | -5.00                 |
| 10,789.00             | 74.60           | 186.50      | 10,518.91             | -472.12      | -590.66      | 535.11                  | 6.91                    | 6.38                   | -2.77                 |
| 10,837.00             | 79.70           | 186.90      | 10,529.58             | -518.58      | -596.12      | 581.89                  | 10.66                   | 10.63                  | 0.83                  |
| 10,884.00             | 81.80           | 186.50      | 10,537.13             | -564.65      | -601.53      | 628.28                  | 4.55                    | 4.47                   | -0.85                 |
| 10,933.00             | 82.80           | 186.40      | 10,543.70             | -612.90      | -606.99      | 676.84                  | 2.05                    | 2.04                   | -0.20                 |
| 10,979.00             | 83.70           | 184.40      | 10,549.11             | -658.38      | -611.28      | 722.51                  | 4.74                    | 1.96                   | -4.35                 |
| 11,027.00             | 85.20           | 180.60      | 10,553.75             | -706.10      | -613.37      | 770.16                  | 8.48                    | 3.13                   | -7.92                 |
| 11,063.00             | 87.10           | 178.30      | 10,556.17             | -742.01      | -613.02      | 805.81                  | 8.28                    | 5.28                   | -6.39                 |
| 11,158.00             | 87.30           | 178.40      | 10,560.81             | -836.86      | -610.29      | 899.76                  | 0.24                    | 0.21                   | 0.11                  |
| 11,253.00             | 88.80           | 180.00      | 10,564.04             | -931.79      | -608.96      | 993.95                  | 2.31                    | 1.58                   | 1.68                  |
| 11,348.00             | 88.80           | 180.40      | 10,566.03             | -1,026.77    | -609.29      | 1,088.37                | 0.42                    | 0.00                   | 0.42                  |
| 11,443.00             | 88.60           | 180.60      | 10,568.19             | -1,121.74    | -610.12      | 1,182.84                | 0.30                    | -0.21                  | 0.21                  |
| 11,538.00             | 91.00           | 180.40      | 10,568.52             | -1,216.73    | -610.95      | 1,277.33                | 2.54                    | 2.53                   | -0.21                 |
| 11,633.00             | 91.20           | 181.10      | 10,566.69             | -1,311.70    | -612.19      | 1,371.85                | 0.77                    | 0.21                   | 0.74                  |
| 11,728.00             | 90.00           | 182.00      | 10,565.70             | -1,406.66    | -614.76      | 1,466.50                | 1.58                    | -1.26                  | 0.95                  |
| 11,823.00             | 90.00           | 181.60      | 10,565.70             | -1,501.61    | -617.75      | 1,561.19                | 0.42                    | 0.00                   | -0.42                 |
| 11,918.00             | 88.10           | 180.90      | 10,567.27             | -1,596.57    | -619.82      | 1,655.79                | 2.13                    | -2.00                  | -0.74                 |
| 12,013.00             | 88.20           | 182.10      | 10,570.34             | -1,691.49    | -622.31      | 1,750.39                | 1.27                    | 0.11                   | 1.26                  |

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| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

### 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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 12,108.00             | 88.90           | 180.90      | 10,572.75             | -1,786.42    | -624.79      | 1,845.01                | 1.46                    | 0.74                   | -1.26                 |
| 12,203.00             | 88.90           | 181.10      | 10,574.57             | -1,881.39    | -626.45      | 1,939.57                | 0.21                    | 0.00                   | 0.21                  |
| 12,298.00             | 88.90           | 181.10      | 10,576.39             | -1,976.36    | -628.27      | 2,034.14                | 0.00                    | 0.00                   | 0.00                  |
| 12,393.00             | 88.40           | 180.00      | 10,578.63             | -2,071.32    | -629.18      | 2,128.62                | 1.27                    | -0.53                  | -1.16                 |
| 12,487.00             | 87.70           | 179.10      | 10,581.83             | -2,165.26    | -628.45      | 2,221.89                | 1.21                    | -0.74                  | -0.96                 |
| 12,582.00             | 88.10           | 179.10      | 10,585.31             | -2,260.19    | -626.96      | 2,316.05                | 0.42                    | 0.42                   | 0.00                  |
| 12,677.00             | 88.30           | 179.80      | 10,588.29             | -2,355.14    | -626.04      | 2,410.31                | 0.77                    | 0.21                   | 0.74                  |
| 12,772.00             | 90.00           | 178.30      | 10,589.70             | -2,450.11    | -624.47      | 2,504.51                | 2.39                    | 1.79                   | -1.58                 |
| 12,867.00             | 92.20           | 177.60      | 10,587.88             | -2,545.02    | -621.07      | 2,598.45                | 2.43                    | 2.32                   | -0.74                 |
| 12,961.00             | 92.10           | 179.30      | 10,584.35             | -2,638.92    | -618.53      | 2,691.47                | 1.81                    | -0.11                  | 1.81                  |
| 13,056.00             | 90.00           | 180.20      | 10,582.61             | -2,733.89    | -618.12      | 2,785.81                | 2.40                    | -2.21                  | 0.95                  |
| 13,151.00             | 88.90           | 178.30      | 10,583.52             | -2,828.88    | -616.87      | 2,880.06                | 2.31                    | -1.16                  | -2.00                 |
| 13,246.00             | 87.30           | 177.40      | 10,586.67             | -2,923.75    | -613.31      | 2,973.95                | 1.93                    | -1.68                  | -0.95                 |
| 13,340.00             | 88.90           | 178.80      | 10,589.79             | -3,017.64    | -610.20      | 3,066.90                | 2.26                    | 1.70                   | 1.49                  |
| 13,435.00             | 89.00           | 178.80      | 10,591.53             | -3,112.61    | -608.21      | 3,161.05                | 0.11                    | 0.11                   | 0.00                  |
| 13,530.00             | 89.20           | 179.70      | 10,593.02             | -3,207.59    | -606.97      | 3,255.30                | 0.97                    | 0.21                   | 0.95                  |
| 13,625.00             | 87.70           | 179.80      | 10,595.59             | -3,302.55    | -606.55      | 3,349.62                | 1.58                    | -1.58                  | 0.11                  |
| 13,720.00             | 87.80           | 181.30      | 10,599.32             | -3,397.47    | -607.46      | 3,444.05                | 1.58                    | 0.11                   | 1.58                  |
| 13,815.00             | 90.50           | 180.90      | 10,600.73             | -3,492.43    | -609.29      | 3,538.62                | 2.87                    | 2.84                   | -0.42                 |
| 13,910.00             | 91.10           | 180.60      | 10,599.41             | -3,587.41    | -610.53      | 3,633.15                | 0.71                    | 0.63                   | -0.32                 |
| 14,004.00             | 91.90           | 180.90      | 10,596.95             | -3,681.37    | -611.76      | 3,726.66                | 0.91                    | 0.85                   | 0.32                  |
| 14,100.00             | 92.50           | 180.60      | 10,593.26             | -3,777.29    | -613.02      | 3,822.12                | 0.70                    | 0.63                   | -0.31                 |
| 14,196.00             | 92.40           | 180.60      | 10,589.16             | -3,873.20    | -614.02      | 3,917.54                | 0.10                    | -0.10                  | 0.00                  |
| 14,291.00             | 90.50           | 180.00      | 10,586.75             | -3,968.16    | -614.52      | 4,011.96                | 2.10                    | -2.00                  | -0.63                 |
| 14,386.00             | 90.90           | 180.40      | 10,585.59             | -4,063.16    | -614.85      | 4,106.40                | 0.60                    | 0.42                   | 0.42                  |
| 14,480.00             | 89.30           | 180.90      | 10,585.43             | -4,157.15    | -615.91      | 4,199.92                | 1.78                    | -1.70                  | 0.53                  |
| 14,576.00             | 88.50           | 180.90      | 10,587.27             | -4,253.12    | -617.42      | 4,295.46                | 0.83                    | -0.83                  | 0.00                  |
| 14,671.00             | 88.60           | 181.30      | 10,589.68             | -4,348.07    | -619.25      | 4,390.02                | 0.43                    | 0.11                   | 0.42                  |
| 14,766.00             | 88.50           | 182.30      | 10,592.08             | -4,442.99    | -622.23      | 4,484.68                | 1.06                    | -0.11                  | 1.05                  |
| 14,861.00             | 88.60           | 181.60      | 10,594.48             | -4,537.90    | -625.46      | 4,579.36                | 0.74                    | 0.11                   | -0.74                 |
| 14,956.00             | 87.80           | 179.30      | 10,597.47             | -4,632.85    | -626.21      | 4,673.79                | 2.56                    | -0.84                  | -2.42                 |
| 15,051.00             | 90.10           | 178.80      | 10,599.21             | -4,727.81    | -624.63      | 4,767.99                | 2.48                    | 2.42                   | -0.53                 |
| 15,146.00             | 90.90           | 179.10      | 10,598.38             | -4,822.79    | -622.89      | 4,862.18                | 0.90                    | 0.84                   | 0.32                  |
| 15,241.00             | 89.80           | 178.60      | 10,597.80             | -4,917.77    | -620.98      | 4,956.35                | 1.27                    | -1.16                  | -0.53                 |
| 15,336.00             | 89.70           | 178.10      | 10,598.21             | -5,012.73    | -618.25      | 5,050.41                | 0.54                    | -0.11                  | -0.53                 |
| 15,431.00             | 86.60           | 177.70      | 10,601.28             | -5,107.60    | -614.77      | 5,144.31                | 3.29                    | -3.26                  | -0.42                 |
| 15,526.00             | 87.30           | 179.50      | 10,606.34             | -5,202.43    | -612.45      | 5,238.29                | 2.03                    | 0.74                   | 1.89                  |
| 15,599.00             | 87.60           | 179.10      | 10,609.58             | -5,275.36    | -611.56      | 5,310.65                | 0.68                    | 0.41                   | -0.55                 |
| 15,660.00             | 87.60           | 179.10      | 10,612.14             | -5,336.29    | -610.60      | 5,371.10                | 0.00                    | 0.00                   | 0.00                  |

# LEAM Drilling Systems LLC

## Survey Report

|           |                     |                              |                                 |
|-----------|---------------------|------------------------------|---------------------------------|
| Company:  | EOG Resources       | Local Co-ordinate Reference: | Well #401                       |
| Project:  | Lea County, NM      | TVD Reference:               | GE 3488' + KB 30' @ 3518.00usft |
| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

| Design Targets                                                                                               |           |          |          |           |         |            |            |                  |                   |
|--------------------------------------------------------------------------------------------------------------|-----------|----------|----------|-----------|---------|------------|------------|------------------|-------------------|
| Target Name                                                                                                  | Dip Angle | Dip Dir. | TVD      | +N/-S     | +E/-W   | Northing   | Easting    | Latitude         | Longitude         |
| - hit/miss target                                                                                            | (°)       | (°)      | (usft)   | (usft)    | (usft)  | (usft)     | (usft)     |                  |                   |
| - Shape                                                                                                      |           |          |          |           |         |            |            |                  |                   |
| SHL (#401H)                                                                                                  | 0.00      | 0.01     | 0.00     | 0.00      | 0.00    | 430,806.00 | 738,830.00 | 32° 10' 55.369 N | 103° 33' 40.975 W |
| - actual wellpath hits target center                                                                         |           |          |          |           |         |            |            |                  |                   |
| - Point                                                                                                      |           |          |          |           |         |            |            |                  |                   |
| UP/FTP (#401H)                                                                                               | 0.00      | 0.00     | 10,553.0 | -634.00   | -636.00 | 430,172.00 | 738,194.00 | 32° 10' 49.140 N | 103° 33' 48.427 W |
|                                                                                                              |           |          | 0        |           |         |            |            |                  |                   |
| - actual wellpath misses target center by 27.45usft at 10957.66usft MD (10546.69 TVD, -637.26 N, -609.49 E)  |           |          |          |           |         |            |            |                  |                   |
| - Point                                                                                                      |           |          |          |           |         |            |            |                  |                   |
| PBHL (#401H)                                                                                                 | 0.00      | 0.01     | 10,593.0 | -5,349.00 | -601.00 | 425,457.00 | 738,229.00 | 32° 10' 2.480 N  | 103° 33' 48.413 W |
|                                                                                                              |           |          | 0        |           |         |            |            |                  |                   |
| - actual wellpath misses target center by 24.90usft at 15660.00usft MD (10612.14 TVD, -5336.29 N, -610.60 E) |           |          |          |           |         |            |            |                  |                   |
| - Point                                                                                                      |           |          |          |           |         |            |            |                  |                   |
| BHL (#401H)                                                                                                  | 0.00      | 0.00     | 10,612.1 | -5,336.29 | -610.60 | 425,469.70 | 738,219.39 | 32° 10' 2.607 N  | 103° 33' 48.523 W |
|                                                                                                              |           |          | 4        |           |         |            |            |                  |                   |
| - actual wellpath hits target center                                                                         |           |          |          |           |         |            |            |                  |                   |
| - Point                                                                                                      |           |          |          |           |         |            |            |                  |                   |

| Casing Points         |                       |         |                     |                   |
|-----------------------|-----------------------|---------|---------------------|-------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Name    | Casing Diameter (") | Hole Diameter (") |
| 1,269.00              | 1,268.89              | 13 3/8" | 13-3/8              | 17-1/2            |
| 5,088.00              | 5,086.48              | 9 5/8"  | 9-5/8               | 12-1/4            |

| Design Annotations    |                       |                   |              |                     |
|-----------------------|-----------------------|-------------------|--------------|---------------------|
| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment             |
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                     |
| 10,606.50             | 10,455.02             | -303.68           | -563.13      | Lease Line Crossing |

# **EOG Resources**

Lea County, NM

Hearns 27 State Com

#401

OH

Design: OH

## **Survey Report - Geographic**

27 March, 2015

# LEAM Drilling Systems LLC

## Survey Report - Geographic

|           |                     |                              |                                 |
|-----------|---------------------|------------------------------|---------------------------------|
| Company:  | EOG Resources       | Local Co-ordinate Reference: | Well #401                       |
| Project:  | Lea County, NM      | TVD Reference:               | GE 3488' + KB 30' @ 3518.00usft |
| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

|             |                                      |               |                |
|-------------|--------------------------------------|---------------|----------------|
| Project     | Lea County, NM                       |               |                |
| 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                  |           | Hearns 27 State Com |                 |                   |                   |
| Site Position:        |           | Northing:           | 430,806.00 usft | Latitude:         | 32° 10' 55.369 N  |
| From:                 | Map       | Easting:            | 738,830.00 usft | Longitude:        | 103° 33' 40.975 W |
| Position Uncertainty: | 0.00 usft | Slot Radius:        | 13-3/16 "       | Grid Convergence: | 0.41 °            |

|                      |       |           |                     |                 |               |                   |
|----------------------|-------|-----------|---------------------|-----------------|---------------|-------------------|
| Well                 | #401  |           |                     |                 |               |                   |
| Well Position        | +N/-S | 0.00 usft | Northing:           | 430,806.00 usft | Latitude:     | 32° 10' 55.369 N  |
|                      | +E/-W | 0.00 usft | Easting:            | 738,830.00 usft | Longitude:    | 103° 33' 40.975 W |
| Position Uncertainty |       | 0.00 usft | Wellhead Elevation: | 0.00 usft       | Ground Level: | 3,488.00 usft     |

|           |            |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Wellbore  | OH         |             |                    |                  |                        |
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | BGGM2014   | 3/10/2015   | 7.29               | 60.05            | 48,168                 |

|                   |                            |                 |                 |                  |      |
|-------------------|----------------------------|-----------------|-----------------|------------------|------|
| Design            |                            | OH              |                 |                  |      |
| Audit Notes:      |                            |                 |                 |                  |      |
| Version:          | 1.0                        | Phase:          | ACTUAL          | Tie On Depth:    | 0.00 |
| Vertical Section: | Depth From (TVD)<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Direction<br>(°) |      |
|                   | 0.00                       | 0.00            | 0.00            | 186.41           |      |

| Survey Program |              | Date              | 3/27/2015     |                 |  |
|----------------|--------------|-------------------|---------------|-----------------|--|
| From<br>(usft) | To<br>(usft) | Survey (Wellbore) | Tool Name     | Description     |  |
| 212.00         | 15,599.00    | Survey #1 (OH)    | LEAM_MWD+HDGM | LEAM MWD + HDGM |  |
| 15,660.00      | 15,660.00    | Survey #2 (OH)    | Project       | Projection      |  |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| 0.00                  | 0.00            | 0.00        | 0.00                  | 0.00         | 0.00         | 430,806.00          | 738,830.00         | 32° 10' 55.369 N | 103° 33' 40.975 W |
| 212.00                | 1.00            | 66.50       | 211.99                | 0.74         | 1.70         | 430,806.74          | 738,831.69         | 32° 10' 55.376 N | 103° 33' 40.955 W |
| 394.00                | 0.60            | 93.70       | 393.97                | 1.31         | 4.10         | 430,807.31          | 738,834.10         | 32° 10' 55.382 N | 103° 33' 40.927 W |
| 517.00                | 1.00            | 108.50      | 516.96                | 0.93         | 5.76         | 430,806.93          | 738,835.76         | 32° 10' 55.378 N | 103° 33' 40.908 W |
| 699.00                | 0.40            | 118.30      | 698.95                | 0.12         | 7.83         | 430,806.12          | 738,837.83         | 32° 10' 55.370 N | 103° 33' 40.884 W |
| 879.00                | 0.50            | 173.30      | 878.94                | -0.96        | 8.47         | 430,805.04          | 738,838.47         | 32° 10' 55.359 N | 103° 33' 40.876 W |
| 1,061.00              | 0.80            | 201.10      | 1,060.93              | -2.93        | 8.11         | 430,803.07          | 738,838.11         | 32° 10' 55.340 N | 103° 33' 40.881 W |
| 1,213.00              | 1.30            | 207.10      | 1,212.90              | -5.45        | 6.94         | 430,800.54          | 738,836.94         | 32° 10' 55.315 N | 103° 33' 40.894 W |
| 1,354.00              | 1.30            | 229.40      | 1,353.87              | -7.92        | 5.00         | 430,798.08          | 738,835.00         | 32° 10' 55.290 N | 103° 33' 40.917 W |
| 1,544.00              | 1.50            | 225.20      | 1,543.81              | -11.07       | 1.60         | 430,794.93          | 738,831.60         | 32° 10' 55.259 N | 103° 33' 40.957 W |
| 1,734.00              | 1.70            | 235.70      | 1,733.74              | -14.41       | -2.49        | 430,791.58          | 738,827.50         | 32° 10' 55.227 N | 103° 33' 41.005 W |

# LEAM Drilling Systems LLC

## Survey Report - Geographic

|           |                     |                              |                                 |
|-----------|---------------------|------------------------------|---------------------------------|
| Company:  | EOG Resources       | Local Co-ordinate Reference: | Well #401                       |
| Project:  | Lea County, NM      | TVD Reference:               | GE 3488' + KB 30' @ 3518.00usft |
| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| 1,923.00              | 1.80            | 238.70      | 1,922.65              | -17.54       | -7.35        | 430,788.46          | 738,822.65         | 32° 10' 55.196 N | 103° 33' 41.062 W |
| 2,113.00              | 1.80            | 237.50      | 2,112.56              | -20.69       | -12.41       | 430,785.31          | 738,817.58         | 32° 10' 55.165 N | 103° 33' 41.121 W |
| 2,304.00              | 1.80            | 241.40      | 2,303.46              | -23.74       | -17.58       | 430,782.26          | 738,812.42         | 32° 10' 55.135 N | 103° 33' 41.181 W |
| 2,494.00              | 1.80            | 245.90      | 2,493.37              | -26.38       | -22.92       | 430,779.61          | 738,807.08         | 32° 10' 55.110 N | 103° 33' 41.244 W |
| 2,683.00              | 1.80            | 251.40      | 2,682.27              | -28.54       | -28.44       | 430,777.46          | 738,801.55         | 32° 10' 55.089 N | 103° 33' 41.308 W |
| 2,873.00              | 1.80            | 262.10      | 2,872.18              | -29.91       | -34.23       | 430,776.09          | 738,795.77         | 32° 10' 55.076 N | 103° 33' 41.375 W |
| 3,063.00              | 1.30            | 275.30      | 3,062.11              | -30.12       | -39.33       | 430,775.88          | 738,790.67         | 32° 10' 55.074 N | 103° 33' 41.435 W |
| 3,252.00              | 1.00            | 280.60      | 3,251.07              | -29.62       | -43.08       | 430,776.38          | 738,786.91         | 32° 10' 55.079 N | 103° 33' 41.478 W |
| 3,442.00              | 0.70            | 171.40      | 3,441.06              | -30.46       | -44.54       | 430,775.54          | 738,785.46         | 32° 10' 55.071 N | 103° 33' 41.495 W |
| 3,632.00              | 1.00            | 106.00      | 3,631.04              | -32.06       | -42.77       | 430,773.94          | 738,787.22         | 32° 10' 55.055 N | 103° 33' 41.475 W |
| 3,823.00              | 0.80            | 80.00       | 3,822.02              | -32.29       | -39.86       | 430,773.71          | 738,790.14         | 32° 10' 55.052 N | 103° 33' 41.441 W |
| 4,014.00              | 0.70            | 87.20       | 4,013.00              | -32.00       | -37.38       | 430,774.00          | 738,792.62         | 32° 10' 55.055 N | 103° 33' 41.412 W |
| 4,203.00              | 0.80            | 79.70       | 4,201.99              | -31.71       | -34.93       | 430,774.29          | 738,795.07         | 32° 10' 55.058 N | 103° 33' 41.384 W |
| 4,392.00              | 1.80            | 163.30      | 4,390.95              | -34.32       | -32.78       | 430,771.68          | 738,797.22         | 32° 10' 55.032 N | 103° 33' 41.359 W |
| 4,583.00              | 2.90            | 128.00      | 4,581.80              | -40.17       | -28.11       | 430,765.83          | 738,801.89         | 32° 10' 54.974 N | 103° 33' 41.305 W |
| 4,773.00              | 1.70            | 134.00      | 4,771.64              | -45.08       | -22.29       | 430,760.92          | 738,807.70         | 32° 10' 54.925 N | 103° 33' 41.238 W |
| 4,964.00              | 2.00            | 103.70      | 4,962.54              | -47.84       | -17.02       | 430,758.16          | 738,812.98         | 32° 10' 54.897 N | 103° 33' 41.177 W |
| 5,041.00              | 1.80            | 103.70      | 5,039.50              | -48.44       | -14.54       | 430,757.56          | 738,815.46         | 32° 10' 54.891 N | 103° 33' 41.148 W |
| 5,239.00              | 1.40            | 21.30       | 5,237.45              | -46.93       | -10.64       | 430,759.07          | 738,819.36         | 32° 10' 54.905 N | 103° 33' 41.102 W |
| 5,430.00              | 4.10            | 265.30      | 5,428.29              | -45.31       | -16.60       | 430,760.69          | 738,813.40         | 32° 10' 54.922 N | 103° 33' 41.172 W |
| 5,620.00              | 5.90            | 267.60      | 5,617.56              | -46.28       | -33.12       | 430,759.72          | 738,796.87         | 32° 10' 54.914 N | 103° 33' 41.364 W |
| 5,810.00              | 6.10            | 267.40      | 5,806.52              | -47.14       | -52.97       | 430,758.86          | 738,777.03         | 32° 10' 54.906 N | 103° 33' 41.595 W |
| 5,999.00              | 6.20            | 267.40      | 5,994.43              | -48.06       | -73.19       | 430,757.94          | 738,756.80         | 32° 10' 54.899 N | 103° 33' 41.830 W |
| 6,189.00              | 7.80            | 276.50      | 6,183.01              | -47.07       | -96.25       | 430,758.93          | 738,733.74         | 32° 10' 54.910 N | 103° 33' 42.099 W |
| 6,379.00              | 8.40            | 276.70      | 6,371.12              | -43.99       | -122.85      | 430,762.01          | 738,707.15         | 32° 10' 54.943 N | 103° 33' 42.408 W |
| 6,569.00              | 8.20            | 275.80      | 6,559.13              | -41.00       | -150.11      | 430,765.00          | 738,679.88         | 32° 10' 54.974 N | 103° 33' 42.725 W |
| 6,759.00              | 8.40            | 275.80      | 6,747.14              | -38.23       | -177.40      | 430,767.77          | 738,652.60         | 32° 10' 55.003 N | 103° 33' 43.042 W |
| 6,950.00              | 8.30            | 276.70      | 6,936.11              | -35.21       | -204.97      | 430,770.79          | 738,625.03         | 32° 10' 55.035 N | 103° 33' 43.362 W |
| 7,139.00              | 7.90            | 277.90      | 7,123.23              | -31.83       | -231.38      | 430,774.17          | 738,598.61         | 32° 10' 55.070 N | 103° 33' 43.670 W |
| 7,329.00              | 7.70            | 278.60      | 7,311.47              | -28.14       | -256.90      | 430,777.86          | 738,573.09         | 32° 10' 55.109 N | 103° 33' 43.966 W |
| 7,511.00              | 8.60            | 283.40      | 7,491.63              | -23.16       | -282.20      | 430,782.84          | 738,547.80         | 32° 10' 55.160 N | 103° 33' 44.260 W |
| 7,606.00              | 9.70            | 286.50      | 7,585.42              | -19.24       | -296.78      | 430,786.76          | 738,533.22         | 32° 10' 55.200 N | 103° 33' 44.429 W |
| 7,700.00              | 8.70            | 284.60      | 7,678.21              | -15.20       | -311.25      | 430,790.80          | 738,518.74         | 32° 10' 55.241 N | 103° 33' 44.597 W |
| 7,890.00              | 7.50            | 285.00      | 7,866.31              | -8.37        | -337.14      | 430,797.63          | 738,492.86         | 32° 10' 55.310 N | 103° 33' 44.898 W |
| 8,079.00              | 7.00            | 287.10      | 8,053.80              | -1.79        | -360.06      | 430,804.21          | 738,469.94         | 32° 10' 55.377 N | 103° 33' 45.164 W |
| 8,268.00              | 8.40            | 282.50      | 8,241.09              | 4.59         | -384.55      | 430,810.59          | 738,445.45         | 32° 10' 55.442 N | 103° 33' 45.449 W |
| 8,363.00              | 9.10            | 282.50      | 8,334.99              | 7.71         | -398.66      | 430,813.71          | 738,431.34         | 32° 10' 55.474 N | 103° 33' 45.612 W |
| 8,458.00              | 8.40            | 283.00      | 8,428.88              | 10.90        | -412.75      | 430,816.90          | 738,417.25         | 32° 10' 55.506 N | 103° 33' 45.776 W |
| 8,649.00              | 8.10            | 273.90      | 8,617.91              | 14.95        | -439.77      | 430,820.95          | 738,390.23         | 32° 10' 55.548 N | 103° 33' 46.090 W |
| 8,838.00              | 5.80            | 263.30      | 8,805.52              | 14.75        | -462.54      | 430,820.75          | 738,367.45         | 32° 10' 55.548 N | 103° 33' 46.355 W |
| 8,934.00              | 5.50            | 261.40      | 8,901.05              | 13.49        | -471.91      | 430,819.49          | 738,358.09         | 32° 10' 55.536 N | 103° 33' 46.464 W |
| 9,029.00              | 4.80            | 256.00      | 8,995.67              | 11.85        | -480.27      | 430,817.85          | 738,349.73         | 32° 10' 55.520 N | 103° 33' 46.562 W |
| 9,124.00              | 4.00            | 248.80      | 9,090.39              | 9.69         | -487.21      | 430,815.69          | 738,342.78         | 32° 10' 55.500 N | 103° 33' 46.643 W |
| 9,219.00              | 3.80            | 251.20      | 9,185.17              | 7.48         | -493.28      | 430,813.48          | 738,336.71         | 32° 10' 55.478 N | 103° 33' 46.713 W |
| 9,314.00              | 3.50            | 247.90      | 9,279.98              | 5.37         | -498.95      | 430,811.37          | 738,331.05         | 32° 10' 55.458 N | 103° 33' 46.780 W |
| 9,409.00              | 3.40            | 249.10      | 9,374.80              | 3.28         | -504.27      | 430,809.28          | 738,325.73         | 32° 10' 55.437 N | 103° 33' 46.842 W |
| 9,504.00              | 3.50            | 233.30      | 9,469.63              | 0.54         | -509.23      | 430,806.54          | 738,320.77         | 32° 10' 55.411 N | 103° 33' 46.900 W |
| 9,599.00              | 3.20            | 232.20      | 9,564.47              | -2.82        | -513.65      | 430,803.18          | 738,316.35         | 32° 10' 55.378 N | 103° 33' 46.951 W |
| 9,693.00              | 1.90            | 214.70      | 9,658.38              | -5.71        | -516.61      | 430,800.29          | 738,313.39         | 32° 10' 55.349 N | 103° 33' 46.986 W |
| 9,788.00              | 0.80            | 206.70      | 9,753.35              | -7.60        | -517.80      | 430,798.40          | 738,312.20         | 32° 10' 55.331 N | 103° 33' 47.000 W |
| 9,940.00              | 1.40            | 72.40       | 9,905.34              | -7.98        | -516.51      | 430,798.02          | 738,313.49         | 32° 10' 55.327 N | 103° 33' 46.985 W |
| 9,983.00              | 1.40            | 77.40       | 9,948.32              | -7.71        | -515.49      | 430,798.29          | 738,314.50         | 32° 10' 55.329 N | 103° 33' 46.973 W |
| 10,030.00             | 3.40            | 144.00      | 9,995.29              | -8.71        | -514.11      | 430,797.29          | 738,315.88         | 32° 10' 55.319 N | 103° 33' 46.957 W |
| 10,077.00             | 7.60            | 166.80      | 10,042.06             | -12.87       | -512.58      | 430,793.13          | 738,317.41         | 32° 10' 55.278 N | 103° 33' 46.940 W |
| 10,124.00             | 13.40           | 179.80      | 10,088.26             | -21.35       | -511.86      | 430,784.65          | 738,318.14         | 32° 10' 55.194 N | 103° 33' 46.932 W |



# LEAM Drilling Systems LLC

## Survey Report - Geographic

|           |                     |                              |                                 |
|-----------|---------------------|------------------------------|---------------------------------|
| Company:  | EOG Resources       | Local Co-ordinate Reference: | Well #401                       |
| Project:  | Lea County, NM      | TVD Reference:               | GE 3488' + KB 30' @ 3518.00usft |
| Site:     | Hearns 27 State Com | MD Reference:                | GE 3488' + KB 30' @ 3518.00usft |
| Well:     | #401                | North Reference:             | Grid                            |
| Wellbore: | OH                  | Survey Calculation Method:   | Minimum Curvature               |
| Design:   | OH                  | Database:                    | EDM 5000.1 Multi_User Db        |

| Survey                      |                    |                |                             |                 |                 |                           |                          |                  |  |                   |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|---------------------------|--------------------------|------------------|--|-------------------|
| Measured<br>Depth<br>(usft) | Inclination<br>(°) | Azimuth<br>(°) | Vertical<br>Depth<br>(usft) | +N/-S<br>(usft) | +E/-W<br>(usft) | Map<br>Northing<br>(usft) | Map<br>Easting<br>(usft) | Latitude         |  | Longitude         |
| 10,172.00                   | 17.30              | 188.10         | 10,134.55                   | -33.98          | -512.84         | 430,772.02                | 738,317.15               | 32° 10' 55.069 N |  | 103° 33' 46.944 W |
| 10,219.00                   | 22.90              | 189.70         | 10,178.67                   | -49.93          | -515.37         | 430,756.07                | 738,314.63               | 32° 10' 54.912 N |  | 103° 33' 46.975 W |
| 10,266.00                   | 27.00              | 188.50         | 10,221.27                   | -69.50          | -518.49         | 430,736.50                | 738,311.51               | 32° 10' 54.718 N |  | 103° 33' 47.013 W |
| 10,314.00                   | 32.10              | 189.20         | 10,263.01                   | -92.88          | -522.14         | 430,713.12                | 738,307.86               | 32° 10' 54.487 N |  | 103° 33' 47.058 W |
| 10,361.00                   | 36.10              | 189.30         | 10,301.93                   | -118.88         | -526.38         | 430,687.12                | 738,303.62               | 32° 10' 54.230 N |  | 103° 33' 47.109 W |
| 10,409.00                   | 41.70              | 190.40         | 10,339.27                   | -148.57         | -531.55         | 430,657.43                | 738,298.45               | 32° 10' 53.937 N |  | 103° 33' 47.172 W |
| 10,456.00                   | 47.10              | 191.10         | 10,372.84                   | -180.86         | -537.69         | 430,625.14                | 738,292.31               | 32° 10' 53.618 N |  | 103° 33' 47.246 W |
| 10,504.00                   | 54.60              | 192.20         | 10,403.12                   | -217.29         | -545.22         | 430,588.71                | 738,284.78               | 32° 10' 53.258 N |  | 103° 33' 47.336 W |
| 10,551.00                   | 58.90              | 191.30         | 10,428.88                   | -255.76         | -553.21         | 430,550.24                | 738,276.78               | 32° 10' 52.877 N |  | 103° 33' 47.433 W |
| 10,599.00                   | 64.10              | 192.00         | 10,451.78                   | -297.06         | -561.73         | 430,508.94                | 738,268.26               | 32° 10' 52.469 N |  | 103° 33' 47.535 W |
| 10,646.00                   | 67.50              | 190.40         | 10,471.04                   | -339.10         | -570.05         | 430,466.90                | 738,259.94               | 32° 10' 52.054 N |  | 103° 33' 47.636 W |
| 10,694.00                   | 68.70              | 190.20         | 10,488.95                   | -382.92         | -578.01         | 430,423.08                | 738,251.98               | 32° 10' 51.621 N |  | 103° 33' 47.732 W |
| 10,742.00                   | 71.60              | 187.80         | 10,505.25                   | -427.51         | -585.07         | 430,378.49                | 738,244.93               | 32° 10' 51.180 N |  | 103° 33' 47.818 W |
| 10,789.00                   | 74.60              | 186.50         | 10,518.91                   | -472.12         | -590.66         | 430,333.88                | 738,239.34               | 32° 10' 50.739 N |  | 103° 33' 47.886 W |
| 10,837.00                   | 79.70              | 186.90         | 10,529.58                   | -518.58         | -596.12         | 430,287.42                | 738,233.88               | 32° 10' 50.280 N |  | 103° 33' 47.954 W |
| 10,884.00                   | 81.80              | 186.50         | 10,537.13                   | -564.65         | -601.53         | 430,241.35                | 738,228.47               | 32° 10' 49.824 N |  | 103° 33' 48.021 W |
| 10,933.00                   | 82.80              | 186.40         | 10,543.70                   | -612.90         | -606.99         | 430,193.10                | 738,223.01               | 32° 10' 49.347 N |  | 103° 33' 48.088 W |
| 10,979.00                   | 83.70              | 184.40         | 10,549.11                   | -658.38         | -611.28         | 430,147.62                | 738,218.71               | 32° 10' 48.897 N |  | 103° 33' 48.142 W |
| 11,027.00                   | 85.20              | 180.60         | 10,553.75                   | -706.10         | -613.37         | 430,099.90                | 738,216.63               | 32° 10' 48.425 N |  | 103° 33' 48.170 W |
| 11,063.00                   | 87.10              | 178.30         | 10,556.17                   | -742.01         | -613.02         | 430,063.99                | 738,216.98               | 32° 10' 48.070 N |  | 103° 33' 48.169 W |
| 11,158.00                   | 87.30              | 178.40         | 10,560.81                   | -836.86         | -610.29         | 429,969.14                | 738,219.71               | 32° 10' 47.131 N |  | 103° 33' 48.145 W |
| 11,253.00                   | 88.80              | 180.00         | 10,564.04                   | -931.79         | -608.96         | 429,874.21                | 738,221.03               | 32° 10' 46.192 N |  | 103° 33' 48.138 W |
| 11,348.00                   | 88.80              | 180.40         | 10,566.03                   | -1,026.77       | -609.29         | 429,779.23                | 738,220.70               | 32° 10' 45.252 N |  | 103° 33' 48.149 W |
| 11,443.00                   | 88.60              | 180.60         | 10,568.19                   | -1,121.74       | -610.12         | 429,684.26                | 738,219.87               | 32° 10' 44.312 N |  | 103° 33' 48.167 W |
| 11,538.00                   | 91.00              | 180.40         | 10,568.52                   | -1,216.73       | -610.95         | 429,589.27                | 738,219.04               | 32° 10' 43.372 N |  | 103° 33' 48.184 W |
| 11,633.00                   | 91.20              | 181.10         | 10,566.69                   | -1,311.70       | -612.19         | 429,494.30                | 738,217.80               | 32° 10' 42.432 N |  | 103° 33' 48.207 W |
| 11,728.00                   | 90.00              | 182.00         | 10,565.70                   | -1,406.66       | -614.76         | 429,399.34                | 738,215.23               | 32° 10' 41.493 N |  | 103° 33' 48.245 W |
| 11,823.00                   | 90.00              | 181.60         | 10,565.70                   | -1,501.61       | -617.75         | 429,304.39                | 738,212.25               | 32° 10' 40.554 N |  | 103° 33' 48.287 W |
| 11,918.00                   | 88.10              | 180.90         | 10,567.27                   | -1,596.57       | -619.82         | 429,209.43                | 738,210.18               | 32° 10' 39.614 N |  | 103° 33' 48.319 W |
| 12,013.00                   | 88.20              | 182.10         | 10,570.34                   | -1,691.49       | -622.31         | 429,114.51                | 738,207.69               | 32° 10' 38.675 N |  | 103° 33' 48.356 W |
| 12,108.00                   | 88.90              | 180.90         | 10,572.75                   | -1,786.42       | -624.79         | 429,019.58                | 738,205.20               | 32° 10' 37.736 N |  | 103° 33' 48.393 W |
| 12,203.00                   | 88.90              | 181.10         | 10,574.57                   | -1,881.39       | -626.45         | 428,924.61                | 738,203.55               | 32° 10' 36.796 N |  | 103° 33' 48.420 W |
| 12,298.00                   | 88.90              | 181.10         | 10,576.39                   | -1,976.36       | -628.27         | 428,829.64                | 738,201.72               | 32° 10' 35.857 N |  | 103° 33' 48.449 W |
| 12,393.00                   | 88.40              | 180.00         | 10,578.63                   | -2,071.32       | -629.18         | 428,734.68                | 738,200.81               | 32° 10' 34.917 N |  | 103° 33' 48.468 W |
| 12,487.00                   | 87.70              | 179.10         | 10,581.83                   | -2,165.26       | -628.45         | 428,640.74                | 738,201.55               | 32° 10' 33.987 N |  | 103° 33' 48.467 W |
| 12,582.00                   | 88.10              | 179.10         | 10,585.31                   | -2,260.19       | -626.96         | 428,545.81                | 738,203.04               | 32° 10' 33.048 N |  | 103° 33' 48.458 W |
| 12,677.00                   | 88.30              | 179.80         | 10,588.29                   | -2,355.14       | -626.04         | 428,450.86                | 738,203.95               | 32° 10' 32.108 N |  | 103° 33' 48.455 W |
| 12,772.00                   | 90.00              | 178.30         | 10,589.70                   | -2,450.11       | -624.47         | 428,355.89                | 738,205.53               | 32° 10' 31.168 N |  | 103° 33' 48.444 W |
| 12,867.00                   | 92.20              | 177.60         | 10,587.88                   | -2,545.02       | -621.07         | 428,260.98                | 738,208.92               | 32° 10' 30.229 N |  | 103° 33' 48.413 W |
| 12,961.00                   | 92.10              | 179.30         | 10,584.35                   | -2,638.92       | -618.53         | 428,167.08                | 738,211.47               | 32° 10' 29.299 N |  | 103° 33' 48.391 W |
| 13,056.00                   | 90.00              | 180.20         | 10,582.61                   | -2,733.89       | -618.12         | 428,072.10                | 738,211.88               | 32° 10' 28.360 N |  | 103° 33' 48.394 W |
| 13,151.00                   | 88.90              | 178.30         | 10,583.52                   | -2,828.88       | -616.87         | 427,977.12                | 738,213.12               | 32° 10' 27.420 N |  | 103° 33' 48.388 W |
| 13,246.00                   | 87.30              | 177.40         | 10,586.67                   | -2,923.75       | -613.31         | 427,882.25                | 738,216.68               | 32° 10' 26.480 N |  | 103° 33' 48.354 W |
| 13,340.00                   | 88.90              | 178.80         | 10,589.79                   | -3,017.64       | -610.20         | 427,788.35                | 738,219.80               | 32° 10' 25.551 N |  | 103° 33' 48.326 W |
| 13,435.00                   | 89.00              | 178.80         | 10,591.53                   | -3,112.61       | -608.21         | 427,693.39                | 738,221.79               | 32° 10' 24.611 N |  | 103° 33' 48.310 W |
| 13,530.00                   | 89.20              | 179.70         | 10,593.02                   | -3,207.59       | -606.97         | 427,598.41                | 738,223.03               | 32° 10' 23.671 N |  | 103° 33' 48.304 W |
| 13,625.00                   | 87.70              | 179.80         | 10,595.59                   | -3,302.55       | -606.55         | 427,503.45                | 738,223.45               | 32° 10' 22.732 N |  | 103° 33' 48.307 W |
| 13,720.00                   | 87.80              | 181.30         | 10,599.32                   | -3,397.47       | -607.46         | 427,408.53                | 738,222.53               | 32° 10' 21.792 N |  | 103° 33' 48.325 W |
| 13,815.00                   | 90.50              | 180.90         | 10,600.73                   | -3,492.43       | -609.29         | 427,313.57                | 738,220.71               | 32° 10' 20.853 N |  | 103° 33' 48.355 W |
| 13,910.00                   | 91.10              | 180.60         | 10,599.41                   | -3,587.41       | -610.53         | 427,218.59                | 738,219.47               | 32° 10' 19.913 N |  | 103° 33' 48.377 W |
| 14,004.00                   | 91.90              | 180.90         | 10,596.95                   | -3,681.37       | -611.76         | 427,124.63                | 738,218.24               | 32° 10' 18.983 N |  | 103° 33' 48.399 W |
| 14,100.00                   | 92.50              | 180.60         | 10,593.26                   | -3,777.29       | -613.02         | 427,028.71                | 738,216.98               | 32° 10' 18.034 N |  | 103° 33' 48.422 W |
| 14,196.00                   | 92.40              | 180.60         | 10,589.16                   | -3,873.20       | -614.02         | 426,932.80                | 738,215.98               | 32° 10' 17.085 N |  | 103° 33' 48.441 W |
| 14,291.00                   | 90.50              | 180.00         | 10,586.75                   | -3,968.16       | -614.52         | 426,837.84                | 738,215.48               | 32° 10' 16.145 N |  | 103° 33' 48.455 W |
| 14,386.00                   | 90.90              | 180.40         | 10,585.59                   | -4,063.16       | -614.85         | 426,742.84                | 738,215.15               | 32° 10' 15.206 N |  | 103° 33' 48.467 W |

# LEAM Drilling Systems LLC

## Survey Report - Geographic

|                  |                     |                                     |                                 |
|------------------|---------------------|-------------------------------------|---------------------------------|
| <b>Company:</b>  | EOG Resources       | <b>Local Co-ordinate Reference:</b> | Well #401                       |
| <b>Project:</b>  | Lea County, NM      | <b>TVD Reference:</b>               | GE 3488' + KB 30' @ 3518.00usft |
| <b>Site:</b>     | Hearns 27 State Com | <b>MD Reference:</b>                | GE 3488' + KB 30' @ 3518.00usft |
| <b>Well:</b>     | #401                | <b>North Reference:</b>             | Grid                            |
| <b>Wellbore:</b> | OH                  | <b>Survey Calculation Method:</b>   | Minimum Curvature               |
| <b>Design:</b>   | OH                  | <b>Database:</b>                    | EDM 5000.1 Multi_User Db        |

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Map Northing (usft) | Map Easting (usft) | Latitude         | Longitude         |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|---------------------|--------------------|------------------|-------------------|
| 14,480.00             | 89.30           | 180.90      | 10,585.43             | -4,157.15    | -615.91      | 426,648.85          | 738,214.08         | 32° 10' 14.275 N | 103° 33' 48.487 W |
| 14,576.00             | 88.50           | 180.90      | 10,587.27             | -4,253.12    | -617.42      | 426,552.88          | 738,212.57         | 32° 10' 13.326 N | 103° 33' 48.513 W |
| 14,671.00             | 88.60           | 181.30      | 10,589.68             | -4,348.07    | -619.25      | 426,457.93          | 738,210.75         | 32° 10' 12.386 N | 103° 33' 48.542 W |
| 14,766.00             | 88.50           | 182.30      | 10,592.08             | -4,442.99    | -622.23      | 426,363.01          | 738,207.77         | 32° 10' 11.447 N | 103° 33' 48.584 W |
| 14,861.00             | 88.60           | 181.60      | 10,594.48             | -4,537.90    | -625.46      | 426,268.10          | 738,204.54         | 32° 10' 10.508 N | 103° 33' 48.630 W |
| 14,956.00             | 87.80           | 179.30      | 10,597.47             | -4,632.85    | -626.21      | 426,173.15          | 738,203.79         | 32° 10' 9.569 N  | 103° 33' 48.646 W |
| 15,051.00             | 90.10           | 178.80      | 10,599.21             | -4,727.81    | -624.63      | 426,078.19          | 738,205.37         | 32° 10' 8.629 N  | 103° 33' 48.636 W |
| 15,146.00             | 90.90           | 179.10      | 10,598.38             | -4,822.79    | -622.89      | 425,983.21          | 738,207.11         | 32° 10' 7.689 N  | 103° 33' 48.624 W |
| 15,241.00             | 89.80           | 178.60      | 10,597.80             | -4,917.77    | -620.98      | 425,888.23          | 738,209.01         | 32° 10' 6.749 N  | 103° 33' 48.609 W |
| 15,336.00             | 89.70           | 178.10      | 10,598.21             | -5,012.73    | -618.25      | 425,793.27          | 738,211.75         | 32° 10' 5.809 N  | 103° 33' 48.585 W |
| 15,431.00             | 86.60           | 177.70      | 10,601.28             | -5,107.60    | -614.77      | 425,698.40          | 738,215.23         | 32° 10' 4.870 N  | 103° 33' 48.553 W |
| 15,526.00             | 87.30           | 179.50      | 10,606.34             | -5,202.43    | -612.45      | 425,603.57          | 738,217.54         | 32° 10' 3.932 N  | 103° 33' 48.534 W |
| 15,599.00             | 87.60           | 179.10      | 10,609.58             | -5,275.36    | -611.56      | 425,530.64          | 738,218.44         | 32° 10' 3.210 N  | 103° 33' 48.529 W |
| 15,660.00             | 87.60           | 179.10      | 10,612.14             | -5,336.29    | -610.60      | 425,469.70          | 738,219.39         | 32° 10' 2.607 N  | 103° 33' 48.523 W |

### Casing Points

| Measured Depth (usft) | Vertical Depth (usft) | Name    | Casing Diameter (") | Hole Diameter (") |
|-----------------------|-----------------------|---------|---------------------|-------------------|
| 1,269.00              | 1,268.89              | 13 3/8" | 13-3/8              | 17-1/2            |
| 5,088.00              | 5,086.48              | 9 5/8"  | 9-5/8               | 12-1/4            |

### Design Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates |              | Comment             |
|-----------------------|-----------------------|-------------------|--------------|---------------------|
|                       |                       | +N/-S (usft)      | +E/-W (usft) |                     |
| 10,606.50             | 10,455.02             | -303.68           | -563.13      | Lease Line Crossing |

# EOG Resources

Project: Lea County, NM  
Site: Hearn 27 State Com  
Well: #401  
Wellbore: OH  
Design: OH



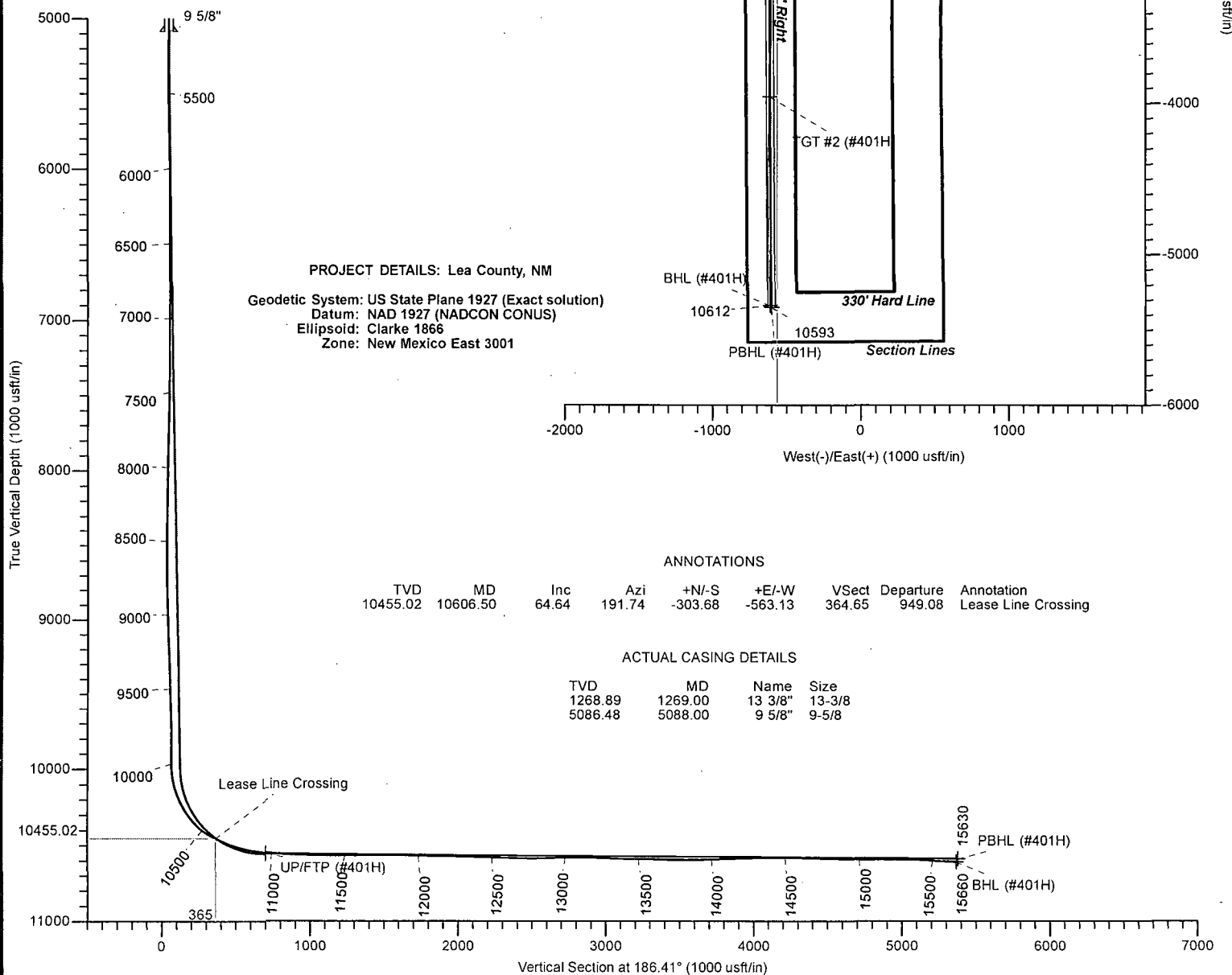
Azimuths to Grid North  
True North: -0.41°  
Magnetic North: 6.88°

Magnetic Field  
Strength: 48167.8snT  
Dip Angle: 60.05°  
Date: 3/10/2015  
Model: BGGM2014

HOBBS OCD  
AUG 28 2015  
RECEIVED

## DESIGN TARGET DETAILS

| Name           | TVD      | +N/-S    | +E/-W   | Northing  | Easting   |
|----------------|----------|----------|---------|-----------|-----------|
| SHL (#401H)    | 0.00     | 0.00     | 0.00    | 430806.00 | 738830.00 |
| UP/FTP (#401H) | 10553.00 | -634.00  | -636.00 | 430172.00 | 738194.00 |
| PBHL (#401H)   | 10593.00 | -5349.00 | -601.00 | 425457.00 | 738229.00 |
| BHL (#401H)    | 10612.14 | -5336.29 | -610.60 | 425469.71 | 738219.40 |



LEAM DRILLING SYSTEMS LLC  
2010 East Davis, Conroe, Texas 77301  
Phone: 936/756-7577, Fax: 936/756-7595

Design: OH (#401/OH)  
Hearn 27 State Com  
Created By: David Vogler  
Date: 9/20, March 27 2015  
Approved: \_\_\_\_\_  
Date: \_\_\_\_\_