

SEP 18 2018

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## **Final Well Report**

**Angus State 24-35-16 605H  
Lea County, New Mexico**

**Prepared for  
Mr. Richard Hill**



# **Section One**

## **Direction Comparison Plot**

### **Actual vs. Proposed**



# Premier Directional Drilling

## Survey Report

|                  |                               |                                     |                                   |
|------------------|-------------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | ENERGEN RESOURCES CORPORATION | <b>Local Co-ordinate Reference:</b> | Well 605H                         |
| <b>Project:</b>  | Lea County, NM                | <b>TVD Reference:</b>               | 3372+25 @ 3397.00usft (Cactus139) |
|                  | Angus State 24-35 16 605H     | <b>MD Reference:</b>                | 3372+25 @ 3397.00usft (Cactus139) |
|                  | 605H                          | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | Lateral                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | Lateral                       | <b>Database:</b>                    | EDM 5000 14 Multi User            |

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

|                                |           |              |                 |                   |                 |
|--------------------------------|-----------|--------------|-----------------|-------------------|-----------------|
| Site Angus State 24-35 16 605H |           |              |                 |                   |                 |
| Site Position:                 |           | Northing:    | 446,541.81 usft | Latitude:         | 32° 13' 26.31 N |
| From:                          | Map       | Easting:     | 798,503.28 usft | Longitude:        | 103° 22' 5.05 W |
| Position Uncertainty:          | 0.00 usft | Slot Radius: | 13.200 in       | Grid Convergence: | 0.51 °          |

|                      |      |           |                     |                 |               |                 |
|----------------------|------|-----------|---------------------|-----------------|---------------|-----------------|
| 605H                 |      |           |                     |                 |               |                 |
| Well Position        | +N-S | 0.00 usft | Northing:           | 446,541.81 usft | Latitude:     | 32° 13' 26.31 N |
|                      | +E-W | 0.00 usft | Easting:            | 798,503.28 usft | Longitude:    | 103° 22' 5.05 W |
| Position Uncertainty |      | 0.00 usft | Wellhead Elevation: | usft            | Ground Level: | 3,372.00 usft   |

| Wellbore  | Lateral    |             |                    |                  |                        |
|-----------|------------|-------------|--------------------|------------------|------------------------|
| Magnetics | Model Name | Sample Date | Declination<br>(°) | Dip Angle<br>(°) | Field Strength<br>(nT) |
|           | HDGM       | 2018/06/19  | 6.77               | 59.92            | 47,978                 |

|                   |                            |                |                |                  |      |
|-------------------|----------------------------|----------------|----------------|------------------|------|
| Design            | Lateral                    |                |                |                  |      |
| 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           | 179.46           |      |

|                       |               |                          |                  |                    |  |
|-----------------------|---------------|--------------------------|------------------|--------------------|--|
| <b>Survey Program</b> |               | <b>Date</b>              | 2018/06/26       |                    |  |
| <b>From</b>           | <b>To</b>     | <b>Survey (Wellbore)</b> | <b>Tool Name</b> | <b>Description</b> |  |
| <b>(usft)</b>         | <b>(usft)</b> |                          |                  |                    |  |
| 92.00                 | 16,837.00     | Survey #1 (Lateral)      | MWD+HRGM         | OWSG MWD + HRGM    |  |
| 16,900.00             | 16,900.00     | Survey #2 (Lateral)      | Projection       | Projection         |  |

|                       |                    |                |                       |             |             |                         |                    |                   |                  |
|-----------------------|--------------------|----------------|-----------------------|-------------|-------------|-------------------------|--------------------|-------------------|------------------|
| <b>Survey</b>         |                    |                |                       |             |             |                         |                    |                   |                  |
| <b>Measured Depth</b> | <b>Inclination</b> | <b>Azimuth</b> | <b>Vertical Depth</b> | <b>+N-S</b> | <b>+E-W</b> | <b>Vertical Section</b> | <b>Dogleg Rate</b> | <b>Build Rate</b> | <b>Turn Rate</b> |
| (usft)                | (°)                | (°)            | (usft)                | (usft)      | (usft)      | (usft)                  | (°/100ft)          | (°/100ft)         | (°/100ft)        |
| 0.00                  | 0.00               | 0.00           | 0.00                  | 0.00        | 0.00        | 0.00                    | 0.00               | 0.00              | 0.00             |
| 92.00                 | 0.80               | 91.79          | 92.00                 | -0.02       | 0.64        | 0.03                    | 0.87               | 0.87              | 0.00             |
| 181.00                | 0.10               | 180.79         | 180.99                | -0.12       | 1.26        | 0.13                    | 0.90               | -0.79             | 100.00           |
| 268.00                | 1.00               | 228.79         | 267.99                | -0.69       | 0.69        | 0.70                    | 1.08               | 1.03              | 55.17            |
| 363.00                | 1.00               | 224.79         | 362.97                | -1.83       | -0.52       | 1.82                    | 0.07               | 0.00              | -4.21            |
| 457.00                | 1.50               | 210.79         | 456.95                | -3.47       | -1.73       | 3.45                    | 0.62               | 0.53              | -14.89           |
| 552.00                | 1.70               | 218.79         | 551.92                | -5.63       | -3.24       | 5.60                    | 0.32               | 0.21              | 8.42             |
| 646.00                | 2.00               | 244.79         | 645.87                | -7.42       | -5.60       | 7.37                    | 0.94               | 0.32              | 27.66            |
| 835.00                | 2.20               | 239.79         | 834.74                | -10.65      | -11.72      | 10.54                   | 0.14               | 0.11              | -2.65            |
| 945.00                | 2.10               | 223.79         | 944.66                | -13.17      | -14.94      | 13.02                   | 0.55               | -0.09             | -14.55           |

# Premier Directional Drilling

## Survey Report

|                  |                               |                                     |                                   |
|------------------|-------------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | ENERGEN RESOURCES CORPORATION | <b>Local Co-ordinate Reference:</b> | Well 605H                         |
| <b>Project:</b>  | Lea County, NM                | <b>TVD Reference:</b>               | 3372+25 @ 3397.00usft (Cactus139) |
| <b>Site:</b>     | Angus State 24-35 16 605H     | <b>MD Reference:</b>                | 3372+25 @ 3397.00usft (Cactus139) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | Lateral                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | Lateral                       | <b>Database:</b>                    | EDM 5000 14 Multi User            |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| 1,005.00              | 2.22            | 236.51      | 1,004.62              | -14.60       | -16.67       | 14.44                   | 0.82                  | 0.20                 | 21.20               |
| 1,068.00              | 2.11            | 227.16      | 1,067.58              | -16.06       | -18.54       | 15.89                   | 0.59                  | -0.17                | -14.84              |
| 1,162.00              | 1.84            | 170.78      | 1,161.53              | -18.73       | -19.57       | 18.54                   | 2.00                  | -0.29                | -59.98              |
| 1,257.00              | 2.67            | 112.13      | 1,256.47              | -21.07       | -17.27       | 20.90                   | 2.45                  | 0.87                 | -61.74              |
| 1,351.00              | 2.41            | 22.65       | 1,350.40              | -20.07       | -14.48       | 19.93                   | 3.81                  | -0.28                | -95.19              |
| 1,446.00              | 1.38            | 338.05      | 1,445.36              | -17.16       | -14.14       | 17.03                   | 1.82                  | -1.08                | -46.95              |
| 1,541.00              | 1.52            | 262.29      | 1,540.33              | -16.27       | -15.82       | 16.12                   | 1.88                  | 0.15                 | -79.75              |
| 1,635.00              | 1.44            | 266.71      | 1,634.30              | -16.51       | -18.23       | 16.33                   | 0.15                  | -0.09                | 4.70                |
| 1,728.00              | 1.98            | 327.16      | 1,727.27              | -15.22       | -20.27       | 15.03                   | 1.92                  | 0.58                 | 65.00               |
| 1,823.00              | 2.65            | 343.46      | 1,822.19              | -11.74       | -21.78       | 11.53                   | 0.98                  | 0.71                 | 17.16               |
| 1,917.00              | 2.67            | 341.54      | 1,916.09              | -7.58        | -23.10       | 7.36                    | 0.10                  | 0.02                 | -2.04               |
| 2,011.00              | 2.62            | 340.62      | 2,009.99              | -3.48        | -24.50       | 3.25                    | 0.07                  | -0.05                | -0.98               |
| 2,106.00              | 2.43            | 342.11      | 2,104.90              | 0.49         | -25.84       | -0.73                   | 0.21                  | -0.20                | 1.57                |
| 2,200.00              | 2.26            | 341.47      | 2,198.82              | 4.14         | -27.04       | -4.40                   | 0.18                  | -0.18                | -0.68               |
| 2,294.00              | 2.03            | 344.38      | 2,292.75              | 7.50         | -28.08       | -7.77                   | 0.27                  | -0.24                | 3.10                |
| 2,389.00              | 1.92            | 347.43      | 2,387.70              | 10.68        | -28.88       | -10.95                  | 0.16                  | -0.12                | 3.21                |
| 2,484.00              | 1.86            | 347.59      | 2,482.64              | 13.73        | -29.56       | -14.01                  | 0.06                  | -0.06                | 0.17                |
| 2,579.00              | 1.67            | 347.88      | 2,577.60              | 16.59        | -30.18       | -16.88                  | 0.20                  | -0.20                | 0.31                |
| 2,673.00              | 1.58            | 351.32      | 2,671.56              | 19.21        | -30.66       | -19.50                  | 0.14                  | -0.10                | 3.66                |
| 2,768.00              | 1.56            | 358.38      | 2,766.53              | 21.80        | -30.90       | -22.09                  | 0.20                  | -0.02                | 7.43                |
| 2,863.00              | 1.48            | 1.53        | 2,861.49              | 24.32        | -30.90       | -24.61                  | 0.12                  | -0.08                | 3.32                |
| 2,957.00              | 1.44            | 4.39        | 2,955.46              | 26.71        | -30.78       | -27.00                  | 0.09                  | -0.04                | 3.04                |
| 3,052.00              | 1.55            | 14.46       | 3,050.43              | 29.15        | -30.36       | -29.43                  | 0.30                  | 0.12                 | 10.60               |
| 3,147.00              | 1.71            | 22.39       | 3,145.39              | 31.70        | -29.50       | -31.98                  | 0.29                  | 0.17                 | 8.35                |
| 3,241.00              | 1.34            | 28.52       | 3,239.36              | 33.96        | -28.45       | -34.23                  | 0.43                  | -0.39                | 6.52                |
| 3,336.00              | 1.47            | 40.91       | 3,334.33              | 35.86        | -27.12       | -36.11                  | 0.35                  | 0.14                 | 13.04               |
| 3,431.00              | 2.29            | 57.61       | 3,429.28              | 37.80        | -24.72       | -38.03                  | 1.03                  | 0.86                 | 17.58               |
| 3,525.00              | 3.26            | 71.95       | 3,523.17              | 39.63        | -20.59       | -39.82                  | 1.26                  | 1.03                 | 15.26               |
| 3,619.00              | 2.72            | 61.87       | 3,617.04              | 41.51        | -16.08       | -41.66                  | 0.80                  | -0.57                | -10.72              |
| 3,714.00              | 2.71            | 53.84       | 3,711.93              | 43.90        | -12.28       | -44.01                  | 0.40                  | -0.01                | -8.45               |
| 3,808.00              | 2.84            | 57.34       | 3,805.82              | 46.47        | -8.52        | -46.55                  | 0.23                  | 0.14                 | 3.72                |
| 3,902.00              | 2.83            | 56.56       | 3,899.71              | 49.00        | -4.63        | -49.04                  | 0.04                  | -0.01                | -0.83               |
| 3,997.00              | 2.56            | 54.25       | 3,994.60              | 51.54        | -0.95        | -51.54                  | 0.31                  | -0.28                | -2.43               |
| 4,091.00              | 2.46            | 56.16       | 4,088.51              | 53.88        | 2.43         | -53.86                  | 0.14                  | -0.11                | 2.03                |
| 4,186.00              | 2.61            | 60.72       | 4,183.42              | 56.08        | 6.01         | -56.02                  | 0.26                  | 0.16                 | 4.80                |
| 4,281.00              | 2.97            | 61.29       | 4,278.31              | 58.32        | 10.06        | -58.22                  | 0.38                  | 0.38                 | 0.60                |
| 4,376.00              | 3.31            | 60.30       | 4,373.16              | 60.86        | 14.60        | -60.72                  | 0.36                  | 0.36                 | -1.04               |
| 4,470.00              | 2.91            | 44.39       | 4,467.03              | 63.91        | 18.62        | -63.73                  | 1.01                  | -0.43                | -16.93              |
| 4,565.00              | 2.85            | 33.88       | 4,561.91              | 67.59        | 21.63        | -67.39                  | 0.56                  | -0.06                | -11.06              |
| 4,658.00              | 2.88            | 45.80       | 4,654.79              | 71.14        | 24.59        | -70.91                  | 0.64                  | 0.03                 | 12.82               |
| 4,753.00              | 2.49            | 47.11       | 4,749.69              | 74.21        | 27.81        | -73.94                  | 0.42                  | -0.41                | 1.38                |
| 4,847.00              | 1.94            | 41.19       | 4,843.62              | 76.80        | 30.36        | -76.51                  | 0.63                  | -0.59                | -6.30               |
| 4,942.00              | 1.97            | 36.43       | 4,938.56              | 79.32        | 32.39        | -79.01                  | 0.17                  | 0.03                 | -5.01               |

## Premier Directional Drilling

## Survey Report

**Company:** ENERGEN RESOURCES CORPORATION  
**Project:** Lea County, NM  
**Site:** Angus State 24-35 16 605H  
**Well:** 605H  
**Wellbore:** Lateral  
**Design:** Lateral

**Local Co-ordinate Reference:** Well 605H  
**TVD Reference:** 3372+25 @ 3397.00usft (Cactus139)  
**MD Reference:** 3372+25 @ 3397.00usft (Cactus139)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000 14 Multi User

## Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N-S (usft) | +E-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|-----------------------|-----------------|-------------|-----------------------|-------------|-------------|-------------------------|-----------------------|----------------------|---------------------|
| 5,037.00              | 1.86            | 28.85       | 5,033.51              | 81.98       | 34.10       | -81.66                  | 0.29                  | -0.12                | -7.98               |
| 5,131.00              | 1.58            | 27.63       | 5,127.47              | 84.47       | 35.44       | -84.13                  | 0.30                  | -0.30                | -1.30               |
| 5,228.00              | 1.26            | 25.95       | 5,224.44              | 86.61       | 36.52       | -86.26                  | 0.33                  | -0.33                | -1.73               |
| 5,323.00              | 1.17            | 19.43       | 5,319.42              | 88.47       | 37.30       | -88.11                  | 0.17                  | -0.09                | -6.86               |
| 5,418.00              | 1.16            | 15.83       | 5,414.40              | 90.31       | 37.89       | -89.95                  | 0.08                  | -0.01                | -3.79               |
| 5,512.00              | 1.11            | 18.47       | 5,508.38              | 92.09       | 38.44       | -91.72                  | 0.08                  | -0.05                | 2.81                |
| 5,607.00              | 0.97            | 9.97        | 5,603.36              | 93.75       | 38.87       | -93.38                  | 0.22                  | -0.15                | -8.95               |
| 5,702.00              | 0.62            | 3.58        | 5,698.35              | 95.06       | 39.04       | -94.68                  | 0.38                  | -0.37                | -6.73               |
| 5,797.00              | 0.52            | 359.19      | 5,793.35              | 96.00       | 39.06       | -95.63                  | 0.11                  | -0.11                | -4.62               |
| 5,891.00              | 0.42            | 14.42       | 5,887.35              | 96.76       | 39.14       | -96.39                  | 0.17                  | -0.11                | 16.20               |
| 5,986.00              | 0.50            | 25.83       | 5,982.34              | 97.47       | 39.41       | -97.09                  | 0.13                  | 0.08                 | 12.01               |
| 6,081.00              | 0.62            | 39.38       | 6,077.34              | 98.24       | 39.92       | -97.86                  | 0.19                  | 0.13                 | 14.26               |
| 6,176.00              | 0.73            | 53.72       | 6,172.33              | 99.00       | 40.73       | -98.61                  | 0.21                  | 0.12                 | 15.09               |
| 6,270.00              | 0.68            | 47.14       | 6,266.32              | 99.73       | 41.62       | -99.33                  | 0.10                  | -0.05                | -7.00               |
| 6,365.00              | 0.75            | 36.78       | 6,361.32              | 100.61      | 42.41       | -100.21                 | 0.15                  | 0.07                 | -10.91              |
| 6,460.00              | 0.67            | 40.17       | 6,456.31              | 101.53      | 43.14       | -101.12                 | 0.10                  | -0.08                | 3.57                |
| 6,554.00              | 0.58            | 40.90       | 6,550.30              | 102.31      | 43.81       | -101.90                 | 0.10                  | -0.10                | 0.78                |
| 6,649.00              | 0.40            | 62.96       | 6,645.30              | 102.83      | 44.42       | -102.40                 | 0.27                  | -0.19                | 23.22               |
| 6,744.00              | 0.38            | 66.10       | 6,740.30              | 103.11      | 45.00       | -102.68                 | 0.03                  | -0.02                | 3.31                |
| 6,838.00              | 0.33            | 97.82       | 6,834.30              | 103.19      | 45.55       | -102.76                 | 0.21                  | -0.05                | 33.74               |
| 6,933.00              | 0.44            | 117.81      | 6,929.29              | 102.99      | 46.15       | -102.55                 | 0.18                  | 0.12                 | 21.04               |
| 7,027.00              | 0.40            | 106.40      | 7,023.29              | 102.73      | 46.78       | -102.28                 | 0.10                  | -0.04                | -12.14              |
| 7,122.00              | 0.36            | 115.24      | 7,118.29              | 102.51      | 47.37       | -102.05                 | 0.07                  | -0.04                | 9.31                |
| 7,216.00              | 0.23            | 54.09       | 7,212.29              | 102.49      | 47.79       | -102.04                 | 0.34                  | -0.14                | -65.05              |
| 7,310.00              | 0.42            | 28.32       | 7,306.29              | 102.90      | 48.10       | -102.45                 | 0.25                  | 0.20                 | -27.41              |
| 7,405.00              | 0.36            | 16.50       | 7,401.29              | 103.50      | 48.35       | -103.04                 | 0.11                  | -0.06                | -12.44              |
| 7,500.00              | 0.55            | 28.63       | 7,496.28              | 104.18      | 48.66       | -103.72                 | 0.22                  | 0.20                 | 12.77               |
| 7,595.00              | 0.52            | 43.94       | 7,591.28              | 104.89      | 49.17       | -104.43                 | 0.15                  | -0.03                | 16.12               |
| 7,689.00              | 0.71            | 46.76       | 7,685.27              | 105.60      | 49.90       | -105.13                 | 0.20                  | 0.20                 | 3.00                |
| 7,784.00              | 0.64            | 63.46       | 7,780.27              | 106.24      | 50.80       | -105.76                 | 0.22                  | -0.07                | 17.58               |
| 7,878.00              | 0.68            | 51.61       | 7,874.26              | 106.82      | 51.71       | -106.33                 | 0.15                  | 0.04                 | -12.61              |
| 7,973.00              | 0.79            | 61.31       | 7,969.25              | 107.49      | 52.72       | -106.98                 | 0.17                  | 0.12                 | 10.21               |
| 8,067.00              | 0.99            | 70.95       | 8,063.24              | 108.06      | 54.06       | -107.55                 | 0.27                  | 0.21                 | 10.26               |
| 8,161.00              | 1.35            | 81.29       | 8,157.22              | 108.49      | 55.92       | -107.96                 | 0.44                  | 0.38                 | 11.00               |
| 8,256.00              | 1.42            | 82.81       | 8,252.19              | 108.81      | 58.19       | -108.26                 | 0.08                  | 0.07                 | 1.60                |
| 8,350.00              | 1.41            | 82.50       | 8,346.16              | 109.11      | 60.50       | -108.53                 | 0.01                  | -0.01                | -0.33               |
| 8,445.00              | 1.91            | 95.64       | 8,441.12              | 109.11      | 63.23       | -108.50                 | 0.66                  | 0.53                 | 13.83               |
| 8,539.00              | 2.59            | 105.40      | 8,535.05              | 108.39      | 66.84       | -107.75                 | 0.83                  | 0.72                 | 10.38               |
| 8,633.00              | 3.95            | 112.18      | 8,628.90              | 106.60      | 71.88       | -105.92                 | 1.50                  | 1.45                 | 7.21                |
| 8,728.00              | 5.18            | 115.81      | 8,723.59              | 103.50      | 78.77       | -102.75                 | 1.33                  | 1.29                 | 3.82                |
| 8,823.00              | 5.99            | 114.64      | 8,818.14              | 99.56       | 87.14       | -98.74                  | 0.86                  | 0.85                 | -1.23               |
| 8,917.00              | 3.97            | 64.89       | 8,911.82              | 98.90       | 94.55       | -98.00                  | 4.86                  | -2.15                | -52.93              |
| 9,012.00              | 2.63            | 9.88        | 9,006.68              | 102.44      | 97.90       | -101.52                 | 3.44                  | -1.41                | -57.91              |

## Premier Directional Drilling

## Survey Report

Company: ENERGEN RESOURCES CORPORATION  
 Project: Lea County, NM  
 Site: Angus State 24-35 16 605H  
 Well: 605H  
 Wellbore: Lateral  
 Design: Lateral

Local Co-ordinate Reference: Well 605H  
 TVD Reference: 3372+25 @ 3397.00usft (Cactus139)  
 MD Reference: 3372+25 @ 3397.00usft (Cactus139)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature  
 Database: EDM 5000 14 Multi User

## Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| 9,106.00              | 2.02            | 1.75        | 9,100.61              | 106.22       | 98.32        | -105.29                 | 0.74                  | -0.65                | -8.65               |
| 9,201.00              | 1.45            | 22.28       | 9,195.56              | 109.01       | 98.83        | -108.07                 | 0.88                  | -0.60                | 21.61               |
| 9,295.00              | 1.24            | 6.36        | 9,289.54              | 111.12       | 99.39        | -110.18                 | 0.45                  | -0.22                | -16.94              |
| 9,390.00              | 1.34            | 11.02       | 9,384.51              | 113.23       | 99.72        | -112.29                 | 0.15                  | 0.11                 | 4.91                |
| 9,485.00              | 1.53            | 15.44       | 9,479.48              | 115.55       | 100.27       | -114.60                 | 0.23                  | 0.20                 | 4.65                |
| 9,579.00              | 1.48            | 2.06        | 9,573.45              | 117.97       | 100.65       | -117.02                 | 0.38                  | -0.05                | -14.23              |
| 9,673.00              | 1.49            | 348.89      | 9,667.42              | 120.38       | 100.45       | -119.43                 | 0.36                  | 0.01                 | -14.01              |
| 9,768.00              | 1.68            | 328.42      | 9,762.39              | 122.78       | 99.49        | -121.84                 | 0.62                  | 0.20                 | -21.55              |
| 9,862.00              | 1.79            | 325.77      | 9,856.34              | 125.17       | 97.94        | -124.24                 | 0.14                  | 0.12                 | -2.82               |
| 9,957.00              | 2.44            | 356.62      | 9,951.28              | 128.41       | 96.99        | -127.49                 | 1.36                  | 0.68                 | 32.47               |
| 10,052.00             | 3.18            | 359.03      | 10,046.17             | 133.07       | 96.82        | -132.15                 | 0.79                  | 0.78                 | 2.54                |
| 10,147.00             | 3.76            | 10.76       | 10,140.99             | 138.76       | 97.36        | -137.84                 | 0.96                  | 0.61                 | 12.35               |
| 10,242.00             | 5.33            | 20.14       | 10,235.69             | 145.96       | 99.46        | -145.02                 | 1.82                  | 1.65                 | 9.87                |
| 10,337.00             | 5.96            | 23.54       | 10,330.23             | 154.63       | 102.95       | -153.65                 | 0.75                  | 0.66                 | 3.58                |
| 10,431.00             | 5.60            | 31.59       | 10,423.75             | 163.01       | 107.30       | -161.99                 | 0.94                  | -0.38                | 8.56                |
| 10,526.00             | 5.89            | 36.79       | 10,518.28             | 170.86       | 112.65       | -169.79                 | 0.63                  | 0.31                 | 5.47                |
| 10,620.00             | 4.98            | 44.50       | 10,611.86             | 177.63       | 118.40       | -176.51                 | 1.24                  | -0.97                | 8.20                |
| 10,715.00             | 5.14            | 40.94       | 10,706.49             | 183.79       | 124.08       | -182.61                 | 0.37                  | 0.17                 | -3.75               |
| 10,809.00             | 5.51            | 35.20       | 10,800.08             | 190.66       | 129.44       | -189.43                 | 0.69                  | 0.39                 | -6.11               |
| 10,903.00             | 6.18            | 41.60       | 10,893.59             | 198.13       | 135.40       | -196.85                 | 0.99                  | 0.71                 | 6.81                |
| 10,998.00             | 5.91            | 48.90       | 10,988.06             | 205.17       | 142.48       | -203.82                 | 0.86                  | -0.28                | 7.68                |
| 11,092.00             | 6.17            | 41.78       | 11,081.54             | 212.12       | 149.49       | -210.70                 | 0.84                  | 0.28                 | -7.57               |
| 11,187.00             | 7.04            | 49.63       | 11,175.91             | 219.70       | 157.33       | -218.20                 | 1.32                  | 0.92                 | 8.26                |
| 11,281.00             | 7.81            | 69.59       | 11,269.14             | 225.66       | 167.70       | -224.06                 | 2.85                  | 0.82                 | 21.23               |
| 11,376.00             | 7.18            | 75.21       | 11,363.33             | 229.42       | 179.49       | -227.72                 | 1.02                  | -0.66                | 5.92                |
| 11,471.00             | 7.46            | 72.51       | 11,457.56             | 232.79       | 191.12       | -230.98                 | 0.47                  | 0.29                 | -2.84               |
| 11,566.00             | 6.63            | 81.05       | 11,553.83             | 235.55       | 202.65       | -233.63                 | 1.38                  | -0.86                | 8.80                |
| 11,599.00             | 5.98            | 87.51       | 11,584.64             | 235.90       | 206.03       | -233.95                 | 3.10                  | -2.10                | 20.84               |
| 11,631.00             | 6.30            | 94.14       | 11,616.46             | 235.85       | 209.45       | -233.86                 | 2.43                  | 1.00                 | 20.72               |
| 11,694.00             | 8.39            | 116.26      | 11,678.95             | 233.57       | 217.02       | -231.51                 | 5.52                  | 3.32                 | 35.11               |
| 11,725.00             | 10.68           | 136.81      | 11,709.53             | 230.47       | 221.02       | -228.38                 | 13.12                 | 7.39                 | 66.29               |
| 11,757.00             | 14.82           | 155.26      | 11,740.74             | 224.59       | 224.76       | -222.46                 | 17.99                 | 12.94                | 57.66               |
| 11,788.00             | 19.34           | 168.55      | 11,770.38             | 215.95       | 227.44       | -213.79                 | 19.18                 | 14.58                | 42.87               |
| 11,820.00             | 23.35           | 175.29      | 11,800.18             | 204.43       | 229.02       | -202.26                 | 14.67                 | 12.53                | 21.06               |
| 11,851.00             | 26.13           | 175.01      | 11,828.33             | 191.50       | 230.12       | -189.32                 | 8.98                  | 8.97                 | -0.90               |
| 11,883.00             | 28.91           | 176.66      | 11,856.71             | 176.76       | 231.18       | -174.57                 | 9.01                  | 8.69                 | 5.16                |
| 11,914.00             | 32.05           | 179.60      | 11,883.43             | 161.05       | 231.67       | -158.85                 | 11.21                 | 10.13                | 9.48                |
| 11,946.00             | 35.89           | 181.28      | 11,909.96             | 143.17       | 231.52       | -140.98                 | 12.35                 | 12.00                | 5.25                |
| 11,977.00             | 39.73           | 181.84      | 11,934.45             | 124.18       | 231.00       | -121.99                 | 12.44                 | 12.39                | 1.81                |
| 12,009.00             | 43.19           | 182.21      | 11,958.42             | 103.01       | 230.25       | -100.83                 | 10.84                 | 10.81                | 1.16                |
| 12,040.00             | 45.78           | 181.76      | 11,980.54             | 81.30        | 229.50       | -79.13                  | 8.42                  | 8.35                 | -1.45               |
| 12,071.00             | 47.70           | 181.14      | 12,001.78             | 58.73        | 228.93       | -56.57                  | 6.36                  | 6.19                 | -2.00               |
| 12,103.00             | 50.04           | 180.82      | 12,022.83             | 34.63        | 228.52       | -32.48                  | 7.35                  | 7.31                 | -1.00               |
| 12,134.00             | 51.65           | 180.89      | 12,042.40             | 10.60        | 228.16       | -8.45                   | 5.20                  | 5.19                 | 0.23                |

# Premier Directional Drilling

## Survey Report

**Company:** ENERGEN RESOURCES CORPORATION  
**Project:** Lea County, NM  
**Site:** Angus State 24-35 16 605H  
**Well:** 605H  
**Wellbore:** Lateral  
**Design:** Lateral

**Local Co-ordinate Reference:** Well 605H  
**TVD Reference:** 3372+25 @ 3397.00usft (Cactus139)  
**MD Reference:** 3372+25 @ 3397.00usft (Cactus139)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** EDM 5000 14 Multi User

### Survey

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|
| 12,166.00             | 53.82           | 178.90      | 12,061.78             | -14.86       | 228.22       | 17.01                   | 8.39                  | 6.78                 | -6.22               |
| 12,197.00             | 56.23           | 178.86      | 12,079.55             | -40.26       | 228.71       | 42.41                   | 7.77                  | 7.77                 | -0.13               |
| 12,229.00             | 58.56           | 177.88      | 12,096.79             | -67.20       | 229.48       | 69.36                   | 7.72                  | 7.28                 | -3.06               |
| 12,260.00             | 58.67           | 177.39      | 12,112.93             | -93.64       | 230.57       | 95.81                   | 1.40                  | 0.35                 | -1.58               |
| 12,292.00             | 61.86           | 177.88      | 12,128.80             | -121.40      | 231.72       | 123.58                  | 10.06                 | 9.97                 | 1.53                |
| 12,323.00             | 64.64           | 179.43      | 12,142.76             | -149.07      | 232.36       | 151.26                  | 10.02                 | 8.97                 | 5.00                |
| 12,354.00             | 68.17           | 180.67      | 12,155.16             | -177.48      | 232.33       | 179.66                  | 11.96                 | 11.39                | 4.00                |
| 12,386.00             | 72.94           | 180.27      | 12,165.81             | -207.64      | 232.09       | 209.82                  | 14.95                 | 14.91                | -1.25               |
| 12,417.00             | 77.45           | 180.50      | 12,173.73             | -237.61      | 231.89       | 239.78                  | 14.57                 | 14.55                | 0.74                |
| 12,449.00             | 83.38           | 179.99      | 12,179.06             | -269.14      | 231.75       | 271.32                  | 18.60                 | 18.53                | -1.59               |
| 12,544.00             | 94.91           | 179.76      | 12,180.47             | -363.97      | 231.96       | 366.14                  | 12.14                 | 12.14                | -0.24               |
| 12,638.00             | 92.90           | 180.82      | 12,174.07             | -457.75      | 231.48       | 459.91                  | 2.42                  | -2.14                | 1.13                |
| 12,732.00             | 91.80           | 180.73      | 12,170.22             | -551.66      | 230.21       | 553.80                  | 1.17                  | -1.17                | -0.10               |
| 12,826.00             | 91.52           | 181.30      | 12,167.49             | -645.60      | 228.55       | 647.73                  | 0.68                  | -0.30                | 0.61                |
| 12,920.00             | 89.41           | 180.25      | 12,166.73             | -739.59      | 227.28       | 741.69                  | 2.51                  | -2.24                | -1.12               |
| 13,015.00             | 88.44           | 179.60      | 12,168.51             | -834.57      | 227.40       | 836.67                  | 1.23                  | -1.02                | -0.68               |
| 13,109.00             | 87.60           | 180.65      | 12,171.76             | -928.51      | 227.20       | 930.61                  | 1.43                  | -0.89                | 1.12                |
| 13,203.00             | 87.27           | 180.65      | 12,175.97             | -1,022.41    | 226.13       | 1,024.49                | 0.35                  | -0.35                | 0.00                |
| 13,297.00             | 87.45           | 179.42      | 12,180.30             | -1,116.31    | 226.08       | 1,118.39                | 1.32                  | 0.19                 | -1.31               |
| 13,391.00             | 88.95           | 180.92      | 12,183.25             | -1,210.25    | 225.80       | 1,212.33                | 2.26                  | 1.60                 | 1.60                |
| 13,485.00             | 87.98           | 180.77      | 12,185.77             | -1,304.21    | 224.41       | 1,306.27                | 1.04                  | -1.03                | -0.16               |
| 13,579.00             | 86.95           | 181.11      | 12,189.93             | -1,398.10    | 222.87       | 1,400.14                | 1.15                  | -1.10                | 0.36                |
| 13,674.00             | 86.53           | 180.45      | 12,195.33             | -1,492.94    | 221.58       | 1,494.96                | 0.82                  | -0.44                | -0.69               |
| 13,768.00             | 89.60           | 179.02      | 12,198.50             | -1,586.87    | 222.01       | 1,588.89                | 3.60                  | 3.27                 | -1.52               |
| 13,862.00             | 90.34           | 178.11      | 12,198.55             | -1,680.84    | 224.37       | 1,682.88                | 1.25                  | 0.79                 | -0.97               |
| 13,957.00             | 89.21           | 178.24      | 12,198.93             | -1,775.79    | 227.39       | 1,777.85                | 1.20                  | -1.19                | 0.14                |
| 14,051.00             | 90.50           | 178.23      | 12,199.16             | -1,869.74    | 230.29       | 1,871.83                | 1.37                  | 1.37                 | -0.01               |
| 14,145.00             | 88.37           | 178.77      | 12,200.09             | -1,963.70    | 232.75       | 1,965.81                | 2.34                  | -2.27                | 0.57                |
| 14,240.00             | 88.88           | 178.87      | 12,202.37             | -2,058.65    | 234.71       | 2,060.77                | 0.55                  | 0.54                 | 0.11                |
| 14,334.00             | 90.41           | 179.41      | 12,202.95             | -2,152.64    | 236.12       | 2,154.77                | 1.73                  | 1.63                 | 0.57                |
| 14,428.00             | 89.29           | 179.75      | 12,203.20             | -2,246.63    | 236.81       | 2,248.76                | 1.25                  | -1.19                | 0.36                |
| 14,522.00             | 90.00           | 180.78      | 12,203.78             | -2,340.63    | 236.37       | 2,342.75                | 1.33                  | 0.76                 | 1.10                |
| 14,617.00             | 89.72           | 180.97      | 12,204.01             | -2,435.62    | 234.92       | 2,437.72                | 0.36                  | -0.29                | 0.20                |
| 14,711.00             | 89.15           | 181.62      | 12,204.94             | -2,529.59    | 232.80       | 2,531.67                | 0.92                  | -0.61                | 0.69                |
| 14,806.00             | 88.82           | 182.06      | 12,206.62             | -2,624.52    | 229.75       | 2,626.57                | 0.58                  | -0.35                | 0.46                |
| 14,900.00             | 88.14           | 182.73      | 12,209.12             | -2,718.41    | 225.82       | 2,720.41                | 1.02                  | -0.72                | 0.71                |
| 14,995.00             | 87.21           | 182.21      | 12,212.97             | -2,813.24    | 221.73       | 2,815.20                | 1.12                  | -0.98                | -0.55               |
| 15,089.00             | 87.72           | 180.47      | 12,217.13             | -2,907.12    | 219.53       | 2,909.06                | 1.93                  | 0.54                 | -1.85               |
| 15,183.00             | 88.19           | 179.26      | 12,220.48             | -3,001.05    | 219.75       | 3,002.99                | 1.38                  | 0.50                 | -1.29               |
| 15,277.00             | 87.25           | 179.04      | 12,224.22             | -3,094.97    | 221.15       | 3,096.92                | 1.03                  | -1.00                | -0.23               |
| 15,371.00             | 87.55           | 179.35      | 12,228.49             | -3,188.86    | 222.47       | 3,190.82                | 0.46                  | 0.32                 | 0.33                |
| 15,465.00             | 85.68           | 178.41      | 12,234.04             | -3,282.68    | 224.30       | 3,284.64                | 2.23                  | -1.99                | -1.00               |
| 15,559.00             | 88.05           | 176.74      | 12,239.18             | -3,376.44    | 228.27       | 3,378.44                | 3.08                  | 2.52                 | -1.78               |



# Premier Directional Drilling

## Survey Report

|                  |                               |                                     |                                   |
|------------------|-------------------------------|-------------------------------------|-----------------------------------|
| <b>Company:</b>  | ENERGEN RESOURCES CORPORATION | <b>Local Co-ordinate Reference:</b> | Well 605H                         |
| <b>Project:</b>  | Lea County, NM                | <b>TVD Reference:</b>               | 3372+25 @ 3397.00usft (Cactus139) |
| <b>Site:</b>     | Angus State 24-35 16 605H     | <b>MD Reference:</b>                | 3372+25 @ 3397.00usft (Cactus139) |
| <b>Well:</b>     | 605H                          | <b>North Reference:</b>             | Grid                              |
| <b>Wellbore:</b> | Lateral                       | <b>Survey Calculation Method:</b>   | Minimum Curvature                 |
| <b>Design:</b>   | Lateral                       | <b>Database:</b>                    | EDM 5000 14 Multi User            |

| Survey                |                 |             |                       |              |              |                         |                       |                      |                     |  |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-----------------------|----------------------|---------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100ft) | Build Rate (°/100ft) | Turn Rate (°/100ft) |  |
| 15,653.00             | 88.36           | 176.68      | 12,242.12             | -3,470.24    | 233.66       | 3,472.29                | 0.34                  | 0.33                 | -0.06               |  |
| 15,748.00             | 88.51           | 176.26      | 12,244.72             | -3,565.02    | 239.51       | 3,567.12                | 0.47                  | 0.16                 | -0.44               |  |
| 15,842.00             | 89.11           | 176.27      | 12,246.67             | -3,658.80    | 245.63       | 3,660.96                | 0.64                  | 0.64                 | 0.01                |  |
| 15,937.00             | 90.76           | 178.05      | 12,246.78             | -3,753.68    | 250.34       | 3,755.87                | 2.55                  | 1.74                 | 1.87                |  |
| 16,030.00             | 90.27           | 178.55      | 12,245.94             | -3,846.63    | 253.10       | 3,848.85                | 0.75                  | -0.53                | 0.54                |  |
| 16,124.00             | 90.50           | 178.69      | 12,245.31             | -3,940.61    | 255.36       | 3,942.84                | 0.29                  | 0.24                 | 0.15                |  |
| 16,218.00             | 90.21           | 178.31      | 12,244.73             | -4,034.57    | 257.82       | 4,036.82                | 0.51                  | -0.31                | -0.40               |  |
| 16,312.00             | 88.86           | 177.19      | 12,245.49             | -4,128.49    | 261.51       | 4,130.77                | 1.87                  | -1.44                | -1.19               |  |
| 16,407.00             | 86.16           | 176.40      | 12,249.62             | -4,223.24    | 266.82       | 4,225.57                | 2.96                  | -2.84                | -0.83               |  |
| 16,501.00             | 88.34           | 174.92      | 12,254.13             | -4,316.86    | 273.92       | 4,319.25                | 2.80                  | 2.32                 | -1.57               |  |
| 16,595.00             | 86.07           | 175.56      | 12,258.71             | -4,410.42    | 281.72       | 4,412.87                | 2.51                  | -2.41                | 0.68                |  |
| 16,689.00             | 85.33           | 175.44      | 12,265.76             | -4,503.86    | 289.07       | 4,506.39                | 0.80                  | -0.79                | -0.13               |  |
| 16,783.00             | 86.08           | 173.56      | 12,272.80             | -4,597.16    | 298.05       | 4,599.77                | 2.15                  | 0.80                 | -2.00               |  |
| 16,837.00             | 87.27           | 171.87      | 12,275.93             | -4,650.63    | 304.89       | 4,653.30                | 3.82                  | 2.20                 | -3.13               |  |
| 16,900.00             | 87.27           | 171.87      | 12,278.93             | -4,712.93    | 313.79       | 4,715.68                | 0.00                  | 0.00                 | 0.00                |  |