



COMPANY: Mewbourne Oil Company  
WELL: Red Hills West 21 W1DM Fed Com 2H  
COUNTY: Lea County N.M.  
DATUM: NAD 1927 (NADCON CONUS)  
RIG: Patterson Patterson 231



Grid Correction MWD: To convert a Magnetic Direction to a Grid Direction, Add 6.66°

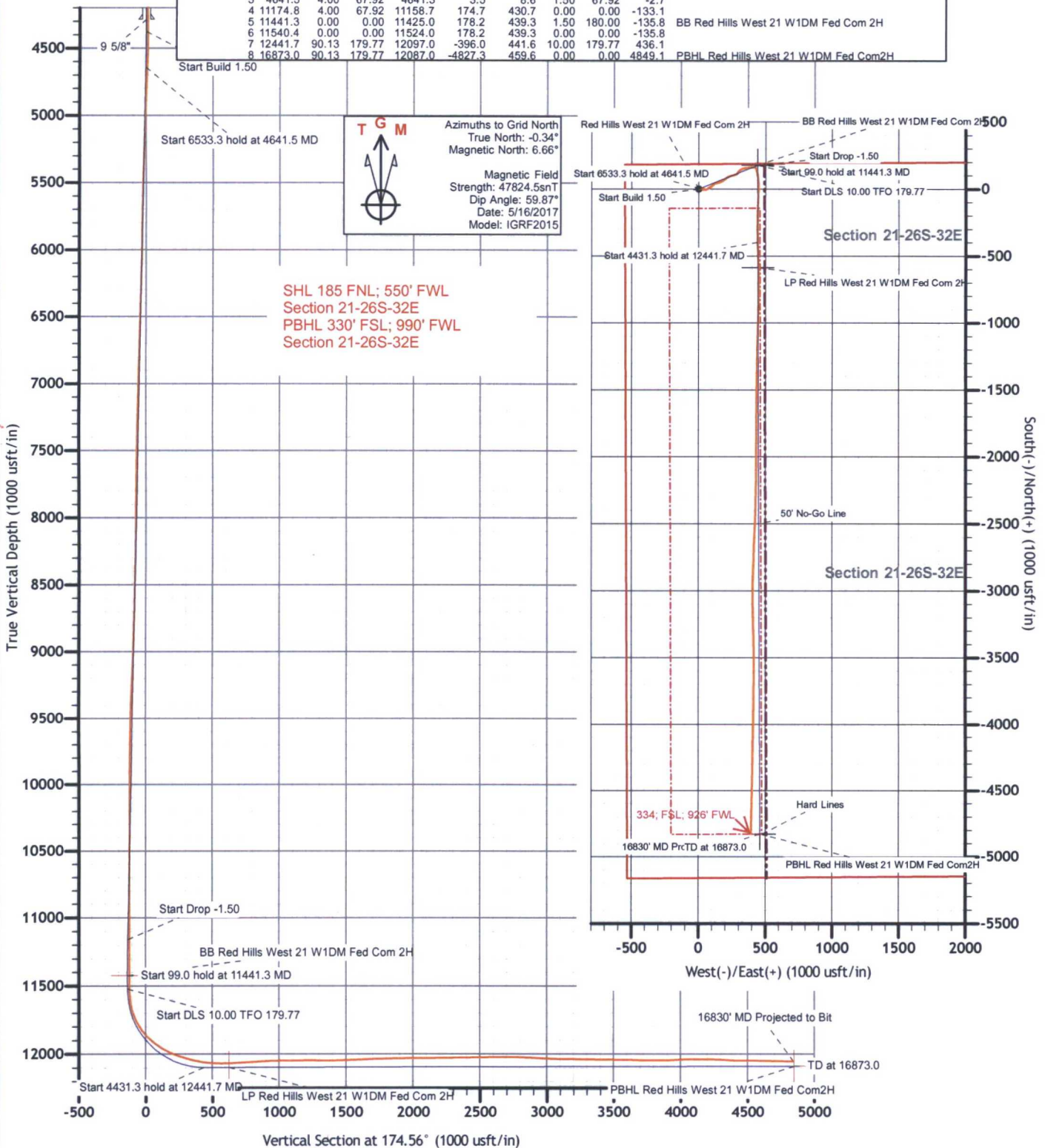
OFFICE: 936.582.7296

GEODETTIC ZONE: New Mexico East 3001  
3150 + 27 @ 3177.0usft (Patterson 231)  
GROUND ELEVATION: 3150.0

| +N/-S | +E/-W | Northing  | Easting   | Latitude       | Longitude         | Slot |
|-------|-------|-----------|-----------|----------------|-------------------|------|
| 0.0   | 0.0   | 377031.00 | 700491.90 | 32° 2' 5.719 N | 103° 41' 10.806 W |      |

#### PLAN SECTIONS

| Sec | MD      | Inc   | Azi    | TVD     | +N/-S   | +E/-W | Dleg  | TFace  | VSec   | Target                                |
|-----|---------|-------|--------|---------|---------|-------|-------|--------|--------|---------------------------------------|
| 1   | 0.0     | 0.00  | 0.00   | 0.0     | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                                       |
| 2   | 4375.0  | 0.00  | 0.00   | 4375.0  | 0.0     | 0.0   | 0.00  | 0.00   | 0.0    |                                       |
| 3   | 4641.5  | 4.00  | 67.92  | 4641.3  | 3.5     | 8.6   | 1.50  | 67.92  | -2.7   |                                       |
| 4   | 11174.8 | 4.00  | 67.92  | 11158.7 | 174.7   | 430.7 | 0.00  | 0.00   | -133.1 |                                       |
| 5   | 11441.3 | 0.00  | 0.00   | 11425.0 | 178.2   | 439.3 | 1.50  | 180.00 | -135.8 | BB Red Hills West 21 W1DM Fed Com 2H  |
| 6   | 11540.4 | 0.00  | 0.00   | 11524.0 | 178.2   | 439.3 | 0.00  | 0.00   | -135.8 |                                       |
| 7   | 12441.7 | 90.13 | 179.77 | 12097.0 | -396.0  | 441.6 | 10.00 | 179.77 | 436.1  |                                       |
| 8   | 16873.0 | 90.13 | 179.77 | 12087.0 | -4827.3 | 459.6 | 0.00  | 0.00   | 4849.1 | PBHL Red Hills West 21 W1DM Fed Com2H |





**HOBBS OCD**  
**SEP 27 2017**  
**RECEIVED**

# **Mewbourne Oil Company**

**Lea County N.M.**

**Section 21-26S-32E Red Hills West 21 W1DM Fed Com**  
**Red Hills West 21 W1DM Fed Com 2H**

**Original Hole**

**Design: Original Hole**

## **Standard Survey Report**

**20 June, 2017**



|                  |                                                   |                                     |                                        |
|------------------|---------------------------------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | Mewbourne Oil Company                             | <b>Local Co-ordinate Reference:</b> | Well Red Hills West 21 W1DM Fed Com 2H |
| <b>Project:</b>  | Lea County N.M.                                   | <b>TVD Reference:</b>               | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Site:</b>     | Section 21-26S-32E Red Hills West 21 W1DM Fed Com | <b>MD Reference:</b>                | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Well:</b>     | Red Hills West 21 W1DM Fed Com 2H                 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Hole                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole                                     | <b>Database:</b>                    | Stryker_EDM                            |

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

|                              |                                                   |                          |                   |
|------------------------------|---------------------------------------------------|--------------------------|-------------------|
| <b>Site</b>                  | Section 21-26S-32E Red Hills West 21 W1DM Fed Com |                          |                   |
| <b>Site Position:</b>        |                                                   | <b>Northing:</b>         | 377,031.00 usft   |
| <b>From:</b>                 | Map                                               | <b>Easting:</b>          | 700,491.90 usft   |
| <b>Position Uncertainty:</b> | 0.0 usft                                          | <b>Slot Radius:</b>      | 13-3/16 "         |
|                              |                                                   | <b>Latitude:</b>         | 32° 2' 5.719 N    |
|                              |                                                   | <b>Longitude:</b>        | 103° 41' 10.806 W |
|                              |                                                   | <b>Grid Convergence:</b> | 0.34 °            |

|                             |                                   |                            |                                  |
|-----------------------------|-----------------------------------|----------------------------|----------------------------------|
| <b>Well</b>                 | Red Hills West 21 W1DM Fed Com 2H |                            |                                  |
| <b>Well Position</b>        | <b>+N/-S</b>                      | 0.0 usft                   | <b>Northing:</b> 377,031.00 usft |
|                             | <b>+E/-W</b>                      | 0.0 usft                   | <b>Easting:</b> 700,491.90 usft  |
| <b>Position Uncertainty</b> | 0.0 usft                          | <b>Wellhead Elevation:</b> | 27.0 usft                        |
|                             |                                   | <b>Latitude:</b>           | 32° 2' 5.719 N                   |
|                             |                                   | <b>Longitude:</b>          | 103° 41' 10.806 W                |
|                             |                                   | <b>Ground Level:</b>       | 3,150.0 usft                     |

|                 |               |  |  |
|-----------------|---------------|--|--|
| <b>Wellbore</b> | Original Hole |  |  |
|-----------------|---------------|--|--|

| Magnetics | Model Name | Sample Date | Declination (°) | Dip Angle (°) | Field Strength (nT) |
|-----------|------------|-------------|-----------------|---------------|---------------------|
|           | IGRF2015   | 5/16/2017   | 7.00            | 59.87         | 47,824.45134647     |

|               |               |  |  |
|---------------|---------------|--|--|
| <b>Design</b> | Original Hole |  |  |
|---------------|---------------|--|--|

|                     |     |                      |        |
|---------------------|-----|----------------------|--------|
| <b>Audit Notes:</b> |     |                      |        |
| <b>Version:</b>     | 1.0 | <b>Phase:</b>        | ACTUAL |
|                     |     | <b>Tie On Depth:</b> | 0.0    |

| Vertical Section: | Depth From (TVD) (usft) | +N/-S (usft) | +E/-W (usft) | Direction (°) |
|-------------------|-------------------------|--------------|--------------|---------------|
|                   | 0.0                     | 0.0          | 0.0          | 97.06         |

| Survey Program |           | Date 6/20/2017             |           |                        |
|----------------|-----------|----------------------------|-----------|------------------------|
| From (usft)    | To (usft) | Survey (Wellbore)          | Tool Name | Description            |
| 100.0          | 16,830.0  | MWD Survey (Original Hole) | MWD+IGRF  | OWSG MWD + IGRF or WMM |

| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 0.0                   | 0.00            | 0.00        | 0.0                   | 0.0          | 0.0          | 0.0                     | 0.00                    | 0.00                   | 0.00                  |
| 100.0                 | 0.30            | 230.70      | 100.0                 | -0.2         | -0.2         | -0.2                    | 0.30                    | 0.30                   | 0.00                  |
| 160.0                 | 0.10            | 25.00       | 160.0                 | -0.2         | -0.3         | -0.3                    | 0.65                    | -0.33                  | 257.17                |
| 218.0                 | 0.60            | 72.00       | 218.0                 | -0.1         | 0.0          | 0.0                     | 0.93                    | 0.86                   | 81.03                 |
| 279.0                 | 1.50            | 78.70       | 279.0                 | 0.2          | 1.1          | 1.1                     | 1.49                    | 1.48                   | 10.98                 |
| 337.0                 | 1.80            | 72.70       | 337.0                 | 0.6          | 2.7          | 2.6                     | 0.60                    | 0.52                   | -10.34                |
| 398.0                 | 2.50            | 75.70       | 397.9                 | 1.2          | 4.9          | 4.7                     | 1.16                    | 1.15                   | 4.92                  |
| 457.0                 | 2.40            | 85.70       | 456.9                 | 1.6          | 7.4          | 7.1                     | 0.74                    | -0.17                  | 16.95                 |
| 517.0                 | 2.70            | 82.70       | 516.8                 | 1.9          | 10.0         | 9.7                     | 0.55                    | 0.50                   | -5.00                 |
| 578.0                 | 2.20            | 81.70       | 577.8                 | 2.2          | 12.6         | 12.3                    | 0.82                    | -0.82                  | -1.64                 |

|                  |                                                   |                                     |                                        |
|------------------|---------------------------------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | Mewbourne Oil Company                             | <b>Local Co-ordinate Reference:</b> | Well Red Hills West 21 W1DM Fed Com 2H |
| <b>Project:</b>  | Lea County N.M.                                   | <b>TVD Reference:</b>               | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Site:</b>     | Section 21-26S-32E Red Hills West 21 W1DM Fed Com | <b>MD Reference:</b>                | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Well:</b>     | Red Hills West 21 W1DM Fed Com 2H                 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Hole                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole                                     | <b>Database:</b>                    | Stryker_EDM                            |

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) |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 637.0                 | 1.70            | 56.70       | 636.7                 | 2.9          | 14.5         | 14.0                    | 1.65                    | -0.85                  | -42.37                |
| 696.0                 | 1.60            | 59.70       | 695.7                 | 3.8          | 15.9         | 15.3                    | 0.22                    | -0.17                  | 5.08                  |
| 761.0                 | 1.60            | 78.70       | 760.7                 | 4.4          | 17.6         | 16.9                    | 0.81                    | 0.00                   | 29.23                 |
| 825.0                 | 1.30            | 87.70       | 824.6                 | 4.6          | 19.2         | 18.5                    | 0.59                    | -0.47                  | 14.06                 |
| 936.0                 | 1.80            | 81.10       | 935.6                 | 4.9          | 22.2         | 21.4                    | 0.48                    | 0.45                   | -5.95                 |
| 1,031.0               | 1.60            | 92.90       | 1,030.6               | 5.1          | 25.0         | 24.2                    | 0.42                    | -0.21                  | 12.42                 |
| 1,127.0               | 1.10            | 103.20      | 1,126.5               | 4.8          | 27.2         | 26.4                    | 0.58                    | -0.52                  | 10.73                 |
| 1,222.0               | 1.00            | 99.90       | 1,221.5               | 4.5          | 28.9         | 28.1                    | 0.12                    | -0.11                  | -3.47                 |
| 1,317.0               | 0.90            | 105.70      | 1,316.5               | 4.1          | 30.5         | 29.7                    | 0.15                    | -0.11                  | 6.11                  |
| 1,412.0               | 0.70            | 118.20      | 1,411.5               | 3.7          | 31.7         | 31.0                    | 0.28                    | -0.21                  | 13.16                 |
| 1,508.0               | 0.70            | 132.30      | 1,507.5               | 3.0          | 32.6         | 32.0                    | 0.18                    | 0.00                   | 14.69                 |
| 1,603.0               | 0.70            | 146.30      | 1,602.5               | 2.1          | 33.4         | 32.9                    | 0.18                    | 0.00                   | 14.74                 |
| 1,698.0               | 0.80            | 138.20      | 1,697.5               | 1.1          | 34.1         | 33.8                    | 0.15                    | 0.11                   | -8.53                 |
| 1,793.0               | 0.90            | 148.20      | 1,792.5               | 0.0          | 35.0         | 34.7                    | 0.19                    | 0.11                   | 10.53                 |
| 1,891.0               | 0.70            | 148.30      | 1,890.5               | -1.2         | 35.7         | 35.6                    | 0.20                    | -0.20                  | 0.10                  |
| 1,987.0               | 0.70            | 149.40      | 1,986.5               | -2.2         | 36.3         | 36.3                    | 0.01                    | 0.00                   | 1.15                  |
| 2,082.0               | 0.50            | 159.20      | 2,081.4               | -3.0         | 36.8         | 36.8                    | 0.24                    | -0.21                  | 10.32                 |
| 2,177.0               | 0.40            | 145.60      | 2,176.4               | -3.7         | 37.1         | 37.3                    | 0.15                    | -0.11                  | -14.32                |
| 2,271.0               | 0.50            | 139.60      | 2,270.4               | -4.3         | 37.5         | 37.8                    | 0.12                    | 0.11                   | -6.38                 |
| 2,367.0               | 0.60            | 146.70      | 2,366.4               | -5.0         | 38.1         | 38.4                    | 0.13                    | 0.10                   | 7.40                  |
| 2,462.0               | 0.10            | 230.40      | 2,461.4               | -5.5         | 38.3         | 38.7                    | 0.63                    | -0.53                  | 88.11                 |
| 2,557.0               | 0.50            | 273.40      | 2,556.4               | -5.5         | 37.8         | 38.2                    | 0.46                    | 0.42                   | 45.26                 |
| 2,651.0               | 0.70            | 278.90      | 2,650.4               | -5.4         | 36.8         | 37.2                    | 0.22                    | 0.21                   | 5.85                  |
| 2,746.0               | 0.90            | 270.70      | 2,745.4               | -5.3         | 35.5         | 35.9                    | 0.24                    | 0.21                   | -8.63                 |
| 2,841.0               | 0.80            | 268.30      | 2,840.4               | -5.3         | 34.1         | 34.5                    | 0.11                    | -0.11                  | -2.53                 |
| 2,936.0               | 0.80            | 263.00      | 2,935.4               | -5.4         | 32.8         | 33.2                    | 0.08                    | 0.00                   | -5.58                 |
| 3,032.0               | 0.60            | 227.20      | 3,031.4               | -5.8         | 31.8         | 32.2                    | 0.49                    | -0.21                  | -37.29                |
| 3,126.0               | 0.20            | 166.40      | 3,125.4               | -6.3         | 31.4         | 32.0                    | 0.57                    | -0.43                  | -64.68                |
| 3,220.0               | 0.20            | 111.60      | 3,219.4               | -6.6         | 31.6         | 32.2                    | 0.20                    | 0.00                   | -58.30                |
| 3,315.0               | 0.80            | 68.00       | 3,314.4               | -6.4         | 32.4         | 32.9                    | 0.70                    | 0.63                   | -45.89                |
| 3,409.0               | 0.90            | 71.80       | 3,408.4               | -5.9         | 33.7         | 34.2                    | 0.12                    | 0.11                   | 4.04                  |
| 3,503.0               | 1.00            | 66.20       | 3,502.4               | -5.3         | 35.2         | 35.5                    | 0.15                    | 0.11                   | -5.96                 |
| 3,597.0               | 0.90            | 59.50       | 3,596.3               | -4.6         | 36.5         | 36.8                    | 0.16                    | -0.11                  | -7.13                 |
| 3,691.0               | 1.10            | 70.60       | 3,690.3               | -4.0         | 38.0         | 38.2                    | 0.30                    | 0.21                   | 11.81                 |
| 3,785.0               | 1.20            | 85.70       | 3,784.3               | -3.6         | 39.9         | 40.0                    | 0.34                    | 0.11                   | 16.06                 |
| 3,880.0               | 1.50            | 82.20       | 3,879.3               | -3.3         | 42.1         | 42.2                    | 0.33                    | 0.32                   | -3.68                 |
| 3,974.0               | 1.80            | 90.00       | 3,973.2               | -3.2         | 44.8         | 44.8                    | 0.40                    | 0.32                   | 8.30                  |
| 4,067.0               | 2.10            | 102.90      | 4,066.2               | -3.6         | 47.9         | 48.0                    | 0.57                    | 0.32                   | 13.87                 |
| 4,162.0               | 1.50            | 131.00      | 4,161.2               | -4.8         | 50.5         | 50.7                    | 1.11                    | -0.63                  | 29.58                 |
| 4,256.0               | 1.00            | 143.10      | 4,255.1               | -6.2         | 52.0         | 52.3                    | 0.60                    | -0.53                  | 12.87                 |
| 4,379.0               | 0.40            | 191.90      | 4,378.1               | -7.5         | 52.5         | 53.0                    | 0.65                    | -0.49                  | 39.67                 |
| 4,473.0               | 1.10            | 101.50      | 4,472.1               | -8.0         | 53.3         | 53.9                    | 1.25                    | 0.74                   | -96.17                |

|                  |                                                   |                                     |                                        |
|------------------|---------------------------------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | Mewbourne Oil Company                             | <b>Local Co-ordinate Reference:</b> | Well Red Hills West 21 W1DM Fed Com 2H |
| <b>Project:</b>  | Lea County N.M.                                   | <b>TVD Reference:</b>               | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Site:</b>     | Section 21-26S-32E Red Hills West 21 W1DM Fed Com | <b>MD Reference:</b>                | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Well:</b>     | Red Hills West 21 W1DM Fed Com 2H                 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Hole                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole                                     | <b>Database:</b>                    | Stryker_EDM                            |

| Survey                |                 |             |                       |              |              |                         |                         |                        |                       |  |
|-----------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|--|
| Measured Depth (usft) | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |  |
| 4,566.0               | 3.80            | 56.60       | 4,565.0               | -6.5         | 56.8         | 57.1                    | 3.35                    | 2.90                   | -48.28                |  |
| 4,661.0               | 4.70            | 56.50       | 4,659.8               | -2.6         | 62.7         | 62.5                    | 0.95                    | 0.95                   | -0.11                 |  |
| 4,754.0               | 4.70            | 57.10       | 4,752.5               | 1.6          | 69.0         | 68.3                    | 0.05                    | 0.00                   | 0.65                  |  |
| 4,849.0               | 4.30            | 54.70       | 4,847.2               | 5.7          | 75.2         | 73.9                    | 0.47                    | -0.42                  | -2.53                 |  |
| 4,944.0               | 4.50            | 54.30       | 4,941.9               | 10.0         | 81.1         | 79.3                    | 0.21                    | 0.21                   | -0.42                 |  |
| 5,039.0               | 4.50            | 55.10       | 5,036.6               | 14.3         | 87.2         | 84.8                    | 0.07                    | 0.00                   | 0.84                  |  |
| 5,134.0               | 4.40            | 54.70       | 5,131.3               | 18.5         | 93.3         | 90.3                    | 0.11                    | -0.11                  | -0.42                 |  |
| 5,229.0               | 4.30            | 54.40       | 5,226.0               | 22.7         | 99.1         | 95.6                    | 0.11                    | -0.11                  | -0.32                 |  |
| 5,323.0               | 4.00            | 53.10       | 5,319.8               | 26.7         | 104.6        | 100.5                   | 0.33                    | -0.32                  | -1.38                 |  |
| 5,419.0               | 4.00            | 50.30       | 5,415.5               | 30.9         | 109.9        | 105.2                   | 0.20                    | 0.00                   | -2.92                 |  |
| 5,513.0               | 4.00            | 47.40       | 5,509.3               | 35.2         | 114.8        | 109.6                   | 0.22                    | 0.00                   | -3.09                 |  |
| 5,607.0               | 4.20            | 71.40       | 5,603.1               | 38.5         | 120.5        | 114.8                   | 1.82                    | 0.21                   | 25.53                 |  |
| 5,702.0               | 4.40            | 76.90       | 5,697.8               | 40.4         | 127.3        | 121.4                   | 0.48                    | 0.21                   | 5.79                  |  |
| 5,797.0               | 4.40            | 76.20       | 5,792.5               | 42.1         | 134.4        | 128.2                   | 0.06                    | 0.00                   | -0.74                 |  |
| 5,891.0               | 4.60            | 76.40       | 5,886.2               | 43.9         | 141.6        | 135.1                   | 0.21                    | 0.21                   | 0.21                  |  |
| 5,986.0               | 4.50            | 71.30       | 5,980.9               | 46.0         | 148.8        | 142.0                   | 0.44                    | -0.11                  | -5.37                 |  |
| 6,080.0               | 4.30            | 68.40       | 6,074.7               | 48.5         | 155.6        | 148.4                   | 0.32                    | -0.21                  | -3.09                 |  |
| 6,175.0               | 4.40            | 68.80       | 6,169.4               | 51.1         | 162.3        | 154.8                   | 0.11                    | 0.11                   | 0.42                  |  |
| 6,271.0               | 4.30            | 70.60       | 6,265.1               | 53.6         | 169.1        | 161.2                   | 0.18                    | -0.10                  | 1.88                  |  |
| 6,366.0               | 3.10            | 56.10       | 6,359.9               | 56.2         | 174.6        | 166.4                   | 1.59                    | -1.26                  | -15.26                |  |
| 6,461.0               | 3.00            | 53.00       | 6,454.8               | 59.2         | 178.7        | 170.1                   | 0.20                    | -0.11                  | -3.26                 |  |
| 6,555.0               | 3.30            | 52.50       | 6,548.6               | 62.3         | 182.8        | 173.8                   | 0.32                    | 0.32                   | -0.53                 |  |
| 6,650.0               | 3.10            | 53.10       | 6,643.5               | 65.5         | 187.1        | 177.6                   | 0.21                    | -0.21                  | 0.63                  |  |
| 6,745.0               | 3.30            | 52.90       | 6,738.3               | 68.7         | 191.3        | 181.4                   | 0.21                    | 0.21                   | -0.21                 |  |
| 6,840.0               | 3.30            | 57.50       | 6,833.2               | 71.8         | 195.8        | 185.5                   | 0.28                    | 0.00                   | 4.84                  |  |
| 6,935.0               | 3.00            | 53.30       | 6,928.0               | 74.7         | 200.1        | 189.4                   | 0.40                    | -0.32                  | -4.42                 |  |
| 7,030.0               | 2.70            | 53.50       | 7,022.9               | 77.6         | 203.9        | 192.8                   | 0.32                    | -0.32                  | 0.21                  |  |
| 7,125.0               | 2.70            | 51.30       | 7,117.8               | 80.3         | 207.4        | 196.0                   | 0.11                    | 0.00                   | -2.32                 |  |
| 7,221.0               | 2.60            | 52.40       | 7,213.7               | 83.0         | 210.9        | 199.1                   | 0.12                    | -0.10                  | 1.15                  |  |
| 7,316.0               | 3.10            | 61.20       | 7,308.6               | 85.6         | 214.9        | 202.7                   | 0.70                    | 0.53                   | 9.26                  |  |
| 7,412.0               | 3.40            | 67.80       | 7,404.4               | 87.9         | 219.8        | 207.3                   | 0.50                    | 0.31                   | 6.88                  |  |
| 7,505.0               | 3.30            | 67.30       | 7,497.3               | 90.0         | 224.8        | 212.0                   | 0.11                    | -0.11                  | -0.54                 |  |
| 7,601.0               | 3.20            | 67.30       | 7,593.1               | 92.1         | 229.8        | 216.8                   | 0.10                    | -0.10                  | 0.00                  |  |
| 7,697.0               | 3.20            | 68.00       | 7,689.0               | 94.1         | 234.8        | 221.4                   | 0.04                    | 0.00                   | 0.73                  |  |
| 7,792.0               | 3.40            | 69.70       | 7,783.8               | 96.1         | 239.9        | 226.3                   | 0.23                    | 0.21                   | 1.79                  |  |
| 7,888.0               | 3.40            | 74.00       | 7,879.7               | 97.9         | 245.3        | 231.4                   | 0.27                    | 0.00                   | 4.48                  |  |
| 7,983.0               | 3.40            | 77.10       | 7,974.5               | 99.3         | 250.7        | 236.6                   | 0.19                    | 0.00                   | 3.26                  |  |
| 8,079.0               | 3.10            | 81.80       | 8,070.3               | 100.3        | 256.1        | 241.8                   | 0.42                    | -0.31                  | 4.90                  |  |
| 8,174.0               | 3.80            | 69.50       | 8,165.2               | 101.8        | 261.6        | 247.1                   | 1.07                    | 0.74                   | -12.95                |  |
| 8,268.0               | 3.60            | 71.40       | 8,259.0               | 103.8        | 267.3        | 252.5                   | 0.25                    | -0.21                  | 2.02                  |  |
| 8,363.0               | 3.20            | 76.90       | 8,353.8               | 105.3        | 272.7        | 257.7                   | 0.54                    | -0.42                  | 5.79                  |  |
| 8,459.0               | 3.80            | 62.40       | 8,449.6               | 107.4        | 278.1        | 262.8                   | 1.11                    | 0.63                   | -15.10                |  |
| 8,554.0               | 2.70            | 56.80       | 8,544.5               | 110.1        | 282.8        | 267.1                   | 1.20                    | -1.16                  | -5.89                 |  |

|                  |                                                   |                                     |                                        |
|------------------|---------------------------------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | Mewbourne Oil Company                             | <b>Local Co-ordinate Reference:</b> | Well Red Hills West 21 W1DM Fed Com 2H |
| <b>Project:</b>  | Lea County N.M.                                   | <b>TVD Reference:</b>               | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Site:</b>     | Section 21-26S-32E Red Hills West 21 W1DM Fed Com | <b>MD Reference:</b>                | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Well:</b>     | Red Hills West 21 W1DM Fed Com 2H                 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Hole                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole                                     | <b>Database:</b>                    | Stryker_EDM                            |

| Survey                                      |                 |             |                       |              |              |                         |                         |                        |                       |
|---------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| Measured Depth (usft)                       | Inclination (°) | Azimuth (°) | Vertical Depth (usft) | +N/-S (usft) | +E/-W (usft) | Vertical Section (usft) | Dogleg Rate (°/100usft) | Build Rate (°/100usft) | Turn Rate (°/100usft) |
| 8,649.0                                     | 2.00            | 55.80       | 8,639.4               | 112.3        | 286.0        | 270.1                   | 0.74                    | -0.74                  | -1.05                 |
| 8,744.0                                     | 2.20            | 36.50       | 8,734.3               | 114.7        | 288.5        | 272.2                   | 0.77                    | 0.21                   | -20.32                |
| 8,839.0                                     | 1.80            | 39.40       | 8,829.3               | 117.3        | 290.5        | 273.9                   | 0.43                    | -0.42                  | 3.05                  |
| 8,934.0                                     | 1.80            | 28.40       | 8,924.2               | 119.7        | 292.2        | 275.3                   | 0.36                    | 0.00                   | -11.58                |
| 9,027.0                                     | 2.50            | 33.80       | 9,017.2               | 122.7        | 294.0        | 276.7                   | 0.78                    | 0.75                   | 5.81                  |
| 9,122.0                                     | 4.40            | 44.70       | 9,112.0               | 127.0        | 297.7        | 279.9                   | 2.11                    | 2.00                   | 11.47                 |
| 9,217.0                                     | 3.90            | 33.90       | 9,206.7               | 132.3        | 302.1        | 283.5                   | 0.97                    | -0.53                  | -11.37                |
| 9,311.0                                     | 3.00            | 45.60       | 9,300.6               | 136.7        | 305.6        | 286.5                   | 1.21                    | -0.96                  | 12.45                 |
| 9,406.0                                     | 3.10            | 54.30       | 9,395.4               | 139.9        | 309.5        | 290.0                   | 0.50                    | 0.11                   | 9.16                  |
| 9,501.0                                     | 4.00            | 63.30       | 9,490.2               | 142.9        | 314.5        | 294.6                   | 1.11                    | 0.95                   | 9.47                  |
| 9,596.0                                     | 3.70            | 61.50       | 9,585.0               | 145.8        | 320.2        | 299.8                   | 0.34                    | -0.32                  | -1.89                 |
| 9,692.0                                     | 1.90            | 58.20       | 9,680.9               | 148.2        | 324.3        | 303.6                   | 1.88                    | -1.88                  | -3.44                 |
| 9,787.0                                     | 2.10            | 69.30       | 9,775.9               | 149.6        | 327.2        | 306.4                   | 0.46                    | 0.21                   | 11.68                 |
| 9,882.0                                     | 2.50            | 65.80       | 9,870.8               | 151.1        | 330.7        | 309.7                   | 0.45                    | 0.42                   | -3.68                 |
| 9,978.0                                     | 3.60            | 83.60       | 9,966.6               | 152.3        | 335.6        | 314.4                   | 1.50                    | 1.15                   | 18.54                 |
| 10,074.0                                    | 3.70            | 78.10       | 10,062.5              | 153.2        | 341.7        | 320.3                   | 0.38                    | 0.10                   | -5.73                 |
| 10,170.0                                    | 3.30            | 77.70       | 10,158.3              | 154.5        | 347.4        | 325.8                   | 0.42                    | -0.42                  | -0.42                 |
| 10,265.0                                    | 1.90            | 86.80       | 10,253.2              | 155.1        | 351.6        | 329.9                   | 1.53                    | -1.47                  | 9.58                  |
| 10,360.0                                    | 2.60            | 82.80       | 10,348.1              | 155.5        | 355.4        | 333.6                   | 0.75                    | 0.74                   | -4.21                 |
| 10,455.0                                    | 2.90            | 80.40       | 10,443.0              | 156.2        | 359.9        | 338.0                   | 0.34                    | 0.32                   | -2.53                 |
| 10,550.0                                    | 2.30            | 90.20       | 10,537.9              | 156.6        | 364.1        | 342.2                   | 0.78                    | -0.63                  | 10.32                 |
| 10,646.0                                    | 2.00            | 84.10       | 10,633.8              | 156.7        | 367.7        | 345.7                   | 0.39                    | -0.31                  | -6.35                 |
| 10,740.0                                    | 3.50            | 75.70       | 10,727.7              | 157.6        | 372.1        | 350.0                   | 1.65                    | 1.60                   | -8.94                 |
| 10,836.0                                    | 3.90            | 77.50       | 10,823.5              | 159.0        | 378.2        | 355.8                   | 0.43                    | 0.42                   | 1.88                  |
| 10,931.0                                    | 3.10            | 82.30       | 10,918.3              | 160.1        | 383.9        | 361.3                   | 0.90                    | -0.84                  | 5.05                  |
| 11,026.0                                    | 3.80            | 82.70       | 11,013.2              | 160.8        | 389.5        | 366.8                   | 0.74                    | 0.74                   | 0.42                  |
| 11,121.0                                    | 3.90            | 83.40       | 11,107.9              | 161.6        | 395.9        | 373.0                   | 0.12                    | 0.11                   | 0.74                  |
| 11,217.0                                    | 3.70            | 91.60       | 11,203.7              | 161.9        | 402.2        | 379.3                   | 0.60                    | -0.21                  | 8.54                  |
| 11,312.0                                    | 3.40            | 86.80       | 11,298.6              | 162.0        | 408.1        | 385.1                   | 0.44                    | -0.32                  | -5.05                 |
| 11,408.0                                    | 3.30            | 93.20       | 11,394.4              | 162.0        | 413.7        | 390.7                   | 0.40                    | -0.10                  | 6.67                  |
| 11,439.9                                    | 3.19            | 95.29       | 11,426.2              | 161.8        | 415.5        | 392.5                   | 0.51                    | -0.35                  | 6.54                  |
| <b>BB Red Hills West 21 W1DM Fed Com 2H</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 11,497.0                                    | 3.00            | 99.40       | 11,483.3              | 161.4        | 418.5        | 395.5                   | 0.51                    | -0.33                  | 7.20                  |
| 11,530.0                                    | 2.90            | 100.10      | 11,516.2              | 161.2        | 420.2        | 397.2                   | 0.32                    | -0.30                  | 2.12                  |
| 11,561.0                                    | 3.30            | 103.20      | 11,547.2              | 160.8        | 421.9        | 398.9                   | 1.40                    | 1.29                   | 10.00                 |
| 11,593.0                                    | 4.90            | 133.50      | 11,579.1              | 159.7        | 423.7        | 400.9                   | 8.25                    | 5.00                   | 94.69                 |
| 11,625.0                                    | 7.70            | 152.70      | 11,610.9              | 156.8        | 425.7        | 403.2                   | 10.84                   | 8.75                   | 60.00                 |
| 11,657.0                                    | 11.80           | 159.70      | 11,642.4              | 151.8        | 427.8        | 406.0                   | 13.31                   | 12.81                  | 21.88                 |
| 11,689.0                                    | 16.20           | 163.00      | 11,673.5              | 144.5        | 430.3        | 409.3                   | 13.97                   | 13.75                  | 10.31                 |
| 11,721.0                                    | 19.60           | 162.70      | 11,703.9              | 135.1        | 433.2        | 413.3                   | 10.63                   | 10.63                  | -0.94                 |
| 11,753.0                                    | 23.50           | 166.70      | 11,733.7              | 123.8        | 436.3        | 417.7                   | 13.02                   | 12.19                  | 12.50                 |
| 11,784.0                                    | 27.10           | 170.90      | 11,761.7              | 110.8        | 438.8        | 421.9                   | 12.97                   | 11.61                  | 13.55                 |

|                  |                                                   |                                     |                                        |
|------------------|---------------------------------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | Mewbourne Oil Company                             | <b>Local Co-ordinate Reference:</b> | Well Red Hills West 21 W1DM Fed Com 2H |
| <b>Project:</b>  | Lea County N.M.                                   | <b>TVD Reference:</b>               | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Site:</b>     | Section 21-26S-32E Red Hills West 21 W1DM Fed Com | <b>MD Reference:</b>                | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Well:</b>     | Red Hills West 21 W1DM Fed Com 2H                 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Hole                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole                                     | <b>Database:</b>                    | Stryker_EDM                            |

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) |
|---------------------------------------------|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|
| 11,816.0                                    | 30.90           | 171.30      | 11,789.7              | 95.4         | 441.2        | 426.1                   | 11.89                   | 11.88                  | 1.25                  |
| 11,848.0                                    | 36.00           | 171.90      | 11,816.4              | 78.0         | 443.8        | 430.8                   | 15.97                   | 15.94                  | 1.88                  |
| 11,880.0                                    | 39.50           | 174.70      | 11,841.7              | 58.5         | 446.0        | 435.5                   | 12.18                   | 10.94                  | 8.75                  |
| 11,911.0                                    | 42.30           | 178.10      | 11,865.1              | 38.3         | 447.3        | 439.2                   | 11.54                   | 9.03                   | 10.97                 |
| 11,943.0                                    | 46.90           | 180.40      | 11,887.9              | 15.8         | 447.6        | 442.2                   | 15.23                   | 14.38                  | 7.19                  |
| 11,975.0                                    | 51.40           | 181.10      | 11,908.8              | -8.4         | 447.2        | 444.9                   | 14.16                   | 14.06                  | 2.19                  |
| 12,007.0                                    | 54.30           | 181.80      | 11,928.1              | -33.9        | 446.6        | 447.4                   | 9.23                    | 9.06                   | 2.19                  |
| 12,038.0                                    | 57.40           | 182.40      | 11,945.5              | -59.5        | 445.6        | 449.6                   | 10.13                   | 10.00                  | 1.94                  |
| 12,070.0                                    | 59.80           | 182.50      | 11,962.2              | -86.8        | 444.5        | 451.8                   | 7.50                    | 7.50                   | 0.31                  |
| 12,102.0                                    | 62.20           | 182.40      | 11,977.7              | -114.7       | 443.3        | 454.0                   | 7.50                    | 7.50                   | -0.31                 |
| 12,134.0                                    | 65.50           | 182.00      | 11,991.8              | -143.4       | 442.2        | 456.4                   | 10.37                   | 10.31                  | -1.25                 |
| 12,166.0                                    | 69.90           | 181.70      | 12,004.0              | -173.0       | 441.2        | 459.1                   | 13.78                   | 13.75                  | -0.94                 |
| 12,198.0                                    | 71.60           | 179.50      | 12,014.5              | -203.2       | 440.9        | 462.5                   | 8.39                    | 5.31                   | -6.88                 |
| 12,261.0                                    | 74.70           | 181.40      | 12,032.8              | -263.5       | 440.4        | 469.5                   | 5.70                    | 4.92                   | 3.02                  |
| 12,292.0                                    | 75.90           | 180.40      | 12,040.6              | -293.5       | 440.0        | 472.7                   | 4.97                    | 3.87                   | -3.23                 |
| 12,324.0                                    | 77.80           | 179.40      | 12,047.9              | -324.6       | 440.0        | 476.6                   | 6.67                    | 5.94                   | -3.13                 |
| 12,356.0                                    | 79.30           | 179.10      | 12,054.3              | -356.0       | 440.4        | 480.8                   | 4.78                    | 4.69                   | -0.94                 |
| 12,387.0                                    | 80.60           | 178.90      | 12,059.7              | -386.5       | 441.0        | 485.1                   | 4.24                    | 4.19                   | -0.65                 |
| 12,419.0                                    | 82.80           | 178.10      | 12,064.3              | -418.2       | 441.8        | 489.8                   | 7.31                    | 6.88                   | -2.50                 |
| 12,450.0                                    | 84.90           | 178.10      | 12,067.6              | -449.0       | 442.8        | 494.6                   | 6.77                    | 6.77                   | 0.00                  |
| 12,482.0                                    | 87.80           | 178.40      | 12,069.7              | -480.9       | 443.8        | 499.5                   | 9.11                    | 9.06                   | 0.94                  |
| 12,514.0                                    | 91.20           | 178.00      | 12,069.9              | -512.9       | 444.8        | 504.4                   | 10.70                   | 10.63                  | -1.25                 |
| 12,546.0                                    | 92.20           | 178.00      | 12,069.0              | -544.8       | 445.9        | 509.5                   | 3.13                    | 3.13                   | 0.00                  |
| 12,577.0                                    | 91.50           | 178.20      | 12,068.0              | -575.8       | 446.9        | 514.3                   | 2.35                    | -2.26                  | 0.65                  |
| 12,586.0                                    | 91.58           | 178.37      | 12,067.7              | -584.8       | 447.2        | 515.7                   | 2.10                    | 0.94                   | 1.87                  |
| <b>LP Red Hills West 21 W1DM Fed Com 2H</b> |                 |             |                       |              |              |                         |                         |                        |                       |
| 12,609.0                                    | 91.80           | 178.80      | 12,067.1              | -607.8       | 447.8        | 519.0                   | 2.10                    | 0.94                   | 1.88                  |
| 12,641.0                                    | 92.60           | 179.50      | 12,065.8              | -639.8       | 448.2        | 523.4                   | 3.32                    | 2.50                   | 2.19                  |
| 12,672.0                                    | 93.00           | 179.50      | 12,064.3              | -670.7       | 448.5        | 527.5                   | 1.29                    | 1.29                   | 0.00                  |
| 12,704.0                                    | 93.10           | 180.00      | 12,062.6              | -702.7       | 448.7        | 531.6                   | 1.59                    | 0.31                   | 1.56                  |
| 12,736.0                                    | 93.90           | 180.00      | 12,060.7              | -734.6       | 448.7        | 535.5                   | 2.50                    | 2.50                   | 0.00                  |
| 12,767.0                                    | 93.80           | 180.10      | 12,058.6              | -765.5       | 448.6        | 539.3                   | 0.46                    | -0.32                  | 0.32                  |
| 12,799.0                                    | 93.70           | 181.10      | 12,056.5              | -797.5       | 448.3        | 542.9                   | 3.13                    | -0.31                  | 3.13                  |
| 12,831.0                                    | 93.70           | 181.60      | 12,054.4              | -829.4       | 447.5        | 546.0                   | 1.56                    | 0.00                   | 1.56                  |
| 12,863.0                                    | 93.50           | 181.40      | 12,052.4              | -861.3       | 446.7        | 549.1                   | 0.88                    | -0.63                  | -0.63                 |
| 12,895.0                                    | 91.30           | 181.30      | 12,051.1              | -893.3       | 446.0        | 552.3                   | 6.88                    | -6.88                  | -0.31                 |
| 12,958.0                                    | 91.40           | 181.40      | 12,049.6              | -956.2       | 444.5        | 558.6                   | 0.22                    | 0.16                   | 0.16                  |
| 13,053.0                                    | 90.10           | 181.10      | 12,048.3              | -1,051.2     | 442.4        | 568.2                   | 1.40                    | -1.37                  | -0.32                 |
| 13,148.0                                    | 90.70           | 181.40      | 12,047.7              | -1,146.2     | 440.3        | 577.8                   | 0.71                    | 0.63                   | 0.32                  |
| 13,243.0                                    | 89.50           | 180.90      | 12,047.5              | -1,241.2     | 438.4        | 587.6                   | 1.37                    | -1.26                  | -0.53                 |
| 13,339.0                                    | 89.10           | 181.00      | 12,048.7              | -1,337.1     | 436.8        | 597.8                   | 0.43                    | -0.42                  | 0.10                  |
| 13,434.0                                    | 92.20           | 180.90      | 12,047.6              | -1,432.1     | 435.2        | 607.9                   | 3.26                    | 3.26                   | -0.11                 |
| 13,529.0                                    | 92.90           | 181.00      | 12,043.4              | -1,527.0     | 433.7        | 618.0                   | 0.74                    | 0.74                   | 0.11                  |

|                  |                                                   |                                     |                                        |
|------------------|---------------------------------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | Mewbourne Oil Company                             | <b>Local Co-ordinate Reference:</b> | Well Red Hills West 21 W1DM Fed Com 2H |
| <b>Project:</b>  | Lea County N.M.                                   | <b>TVD Reference:</b>               | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Site:</b>     | Section 21-26S-32E Red Hills West 21 W1DM Fed Com | <b>MD Reference:</b>                | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Well:</b>     | Red Hills West 21 W1DM Fed Com 2H                 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Hole                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole                                     | <b>Database:</b>                    | Stryker_EDM                            |

| 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) |  |
| 13,625.0                              | 92.20           | 180.20      | 12,039.1              | -1,622.9     | 432.7        | 628.7                   | 1.11                    | -0.73                  | -0.83                 |  |
| 13,720.0                              | 91.40           | 180.00      | 12,036.1              | -1,717.9     | 432.5        | 640.2                   | 0.87                    | -0.84                  | -0.21                 |  |
| 13,815.0                              | 90.90           | 180.10      | 12,034.2              | -1,812.8     | 432.4        | 651.8                   | 0.54                    | -0.53                  | 0.11                  |  |
| 13,910.0                              | 90.60           | 180.30      | 12,033.0              | -1,907.8     | 432.1        | 663.2                   | 0.38                    | -0.32                  | 0.21                  |  |
| 14,006.0                              | 90.20           | 179.70      | 12,032.3              | -2,003.8     | 432.1        | 675.0                   | 0.75                    | -0.42                  | -0.63                 |  |
| 14,101.0                              | 91.30           | 180.60      | 12,031.1              | -2,098.8     | 431.8        | 686.4                   | 1.50                    | 1.16                   | 0.95                  |  |
| 14,196.0                              | 91.30           | 181.00      | 12,028.9              | -2,193.8     | 430.5        | 696.7                   | 0.42                    | 0.00                   | 0.42                  |  |
| 14,291.0                              | 90.30           | 181.20      | 12,027.6              | -2,288.8     | 428.7        | 706.6                   | 1.07                    | -1.05                  | 0.21                  |  |
| 14,386.0                              | 89.80           | 180.40      | 12,027.5              | -2,383.7     | 427.4        | 716.9                   | 0.99                    | -0.53                  | -0.84                 |  |
| 14,481.0                              | 92.20           | 182.70      | 12,025.8              | -2,478.7     | 424.8        | 726.1                   | 3.50                    | 2.53                   | 2.42                  |  |
| 14,576.0                              | 91.80           | 182.70      | 12,022.5              | -2,573.5     | 420.3        | 733.3                   | 0.42                    | -0.42                  | 0.00                  |  |
| 14,671.0                              | 88.80           | 182.20      | 12,022.0              | -2,668.4     | 416.3        | 740.9                   | 3.20                    | -3.16                  | -0.53                 |  |
| 14,766.0                              | 88.10           | 181.60      | 12,024.6              | -2,763.3     | 413.1        | 749.4                   | 0.97                    | -0.74                  | -0.63                 |  |
| 14,861.0                              | 87.50           | 181.70      | 12,028.3              | -2,858.2     | 410.4        | 758.4                   | 0.64                    | -0.63                  | 0.11                  |  |
| 14,956.0                              | 86.20           | 181.70      | 12,033.5              | -2,953.0     | 407.6        | 767.2                   | 1.37                    | -1.37                  | 0.00                  |  |
| 15,051.0                              | 88.50           | 179.40      | 12,037.9              | -3,047.9     | 406.7        | 778.0                   | 3.42                    | 2.42                   | -2.42                 |  |
| 15,145.0                              | 89.30           | 178.30      | 12,039.7              | -3,141.9     | 408.5        | 791.4                   | 1.45                    | 0.85                   | -1.17                 |  |
| 15,240.0                              | 90.90           | 178.80      | 12,039.5              | -3,236.8     | 411.0        | 805.4                   | 1.76                    | 1.68                   | 0.53                  |  |
| 15,335.0                              | 88.60           | 178.90      | 12,039.9              | -3,331.8     | 412.9        | 819.0                   | 2.42                    | -2.42                  | 0.11                  |  |
| 15,431.0                              | 88.50           | 178.70      | 12,042.3              | -3,427.8     | 414.9        | 832.8                   | 0.23                    | -0.10                  | -0.21                 |  |
| 15,526.0                              | 89.10           | 179.60      | 12,044.3              | -3,522.7     | 416.3        | 845.8                   | 1.14                    | 0.63                   | 0.95                  |  |
| 15,621.0                              | 90.20           | 180.50      | 12,044.9              | -3,617.7     | 416.2        | 857.4                   | 1.50                    | 1.16                   | 0.95                  |  |
| 15,716.0                              | 87.10           | 180.40      | 12,047.2              | -3,712.7     | 415.4        | 868.4                   | 3.26                    | -3.26                  | -0.11                 |  |
| 15,811.0                              | 90.90           | 180.10      | 12,048.8              | -3,807.7     | 415.0        | 879.6                   | 4.01                    | 4.00                   | -0.32                 |  |
| 15,906.0                              | 93.00           | 181.50      | 12,045.6              | -3,902.6     | 413.7        | 890.0                   | 2.66                    | 2.21                   | 1.47                  |  |
| 16,000.0                              | 92.60           | 180.40      | 12,041.0              | -3,996.5     | 412.2        | 899.9                   | 1.24                    | -0.43                  | -1.17                 |  |
| 16,094.0                              | 89.50           | 180.90      | 12,039.3              | -4,090.4     | 411.1        | 910.4                   | 3.34                    | -3.30                  | 0.53                  |  |
| 16,190.0                              | 90.90           | 181.70      | 12,038.9              | -4,186.4     | 408.9        | 920.1                   | 1.68                    | 1.46                   | 0.83                  |  |
| 16,285.0                              | 86.20           | 181.60      | 12,041.3              | -4,281.3     | 406.2        | 929.0                   | 4.95                    | -4.95                  | -0.11                 |  |
| 16,380.0                              | 86.70           | 181.30      | 12,047.2              | -4,376.1     | 403.8        | 938.3                   | 0.61                    | 0.53                   | -0.32                 |  |
| 16,474.0                              | 88.90           | 180.90      | 12,050.8              | -4,470.0     | 402.0        | 948.0                   | 2.38                    | 2.34                   | -0.43                 |  |
| 16,568.0                              | 91.00           | 180.70      | 12,050.9              | -4,564.0     | 400.7        | 958.3                   | 2.24                    | 2.23                   | -0.21                 |  |
| 16,663.0                              | 88.40           | 181.10      | 12,051.4              | -4,659.0     | 399.2        | 968.4                   | 2.77                    | -2.74                  | 0.42                  |  |
| 16,758.0                              | 88.50           | 181.20      | 12,054.0              | -4,753.9     | 397.3        | 978.2                   | 0.15                    | 0.11                   | 0.11                  |  |
| 16,779.0                              | 89.70           | 181.50      | 12,054.3              | -4,774.9     | 396.8        | 980.3                   | 5.89                    | 5.71                   | 1.43                  |  |
| 16,829.9                              | 89.70           | 181.50      | 12,054.6              | -4,825.8     | 395.4        | 985.2                   | 0.00                    | 0.00                   | 0.00                  |  |
| PBHL Red Hills West 21 W1DM Fed Com2H |                 |             |                       |              |              |                         |                         |                        |                       |  |
| 16,830.0                              | 89.70           | 181.50      | 12,054.6              | -4,825.9     | 395.4        | 985.2                   | 0.00                    | 0.00                   | 0.00                  |  |
| 16830' MD Projected to Bit            |                 |             |                       |              |              |                         |                         |                        |                       |  |



# Microsoft Survey Report



|                  |                                                   |                                     |                                        |
|------------------|---------------------------------------------------|-------------------------------------|----------------------------------------|
| <b>Company:</b>  | Mewbourne Oil Company                             | <b>Local Co-ordinate Reference:</b> | Well Red Hills West 21 W1DM Fed Com 2H |
| <b>Project:</b>  | Lea County N.M.                                   | <b>TVD Reference:</b>               | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Site:</b>     | Section 21-26S-32E Red Hills West 21 W1DM Fed Com | <b>MD Reference:</b>                | 3150 + 27 @ 3177.0usft (Patterson 231) |
| <b>Well:</b>     | Red Hills West 21 W1DM Fed Com 2H                 | <b>North Reference:</b>             | Grid                                   |
| <b>Wellbore:</b> | Original Hole                                     | <b>Survey Calculation Method:</b>   | Minimum Curvature                      |
| <b>Design:</b>   | Original Hole                                     | <b>Database:</b>                    | Stryker_EDM                            |

## Design Annotations

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                    |
|-----------------------------|-----------------------------|-------------------|-----------------|----------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                            |
| 16,830.0                    | 12,054.6                    | -4,825.9          | 395.4           | 16830' MD Projected to Bit |



July 28, 2017

New Mexico Energy, Minerals and Natural Resources Department  
Attn: Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

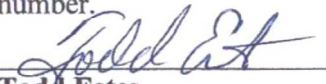
Attn: Jackie Lathan

Re: Mewbourne Oil Company  
Red Hills West 21 W1DM Federal Com #002H  
Wolfcamp A Shale (W1)  
Lea County, New Mexico  
API# 30-025-43427

Enclosed please find the original and one (1) copy of the survey performed on the reference well by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C. Other information required by your office is as follows:

| <u>Name &amp; Title</u> | <u>Drainhole No.</u> | <u>Survey Depths</u> | <u>Dates Performed</u> | <u>Type Survey</u> |
|-------------------------|----------------------|----------------------|------------------------|--------------------|
| Keith Broussard         | Original Hole        | 936ft. to 16,779ft.  | 05-26-17 to 06-20-17   | MWD Survey         |

A certified plat on which the bottom-hole location is oriented to both surface location and to the lease lines (or unit lines in case of pooling) is attached to the survey report. If any other information is required, please contact the undersigned at the letterhead address and phone number.

  
Todd Estes

Enclosures

CC:

Mewbourne Oil Company  
Attn: Frosty Lathan  
P.O. Box 5720  
Hobbs, NM 88241

Mewbourne Oil Company  
Attn: Robin Terrell  
P.O. Box 5720  
Hobbs, NM 88241

NMEMaNRD\Mewbourne Oil Company\Red Hills West 21 W1DM Fed Com #2H\M171036

**STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.**  
P.O. Box 1250  
Montgomery, TX 77356  
Office (936) 582-7296 \* Fax (936)-588-4163



July 28, 2017

Survey Certification Report

STATE OF            TEXAS

COUNTY OF        Montgomery

I, Todd Estes, certify that I am employed by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C., and that I did on the day(s) of May 26, 2017, through June 20, 2017 conduct or supervise the taking of a SEDS Original Hole MWD Survey from a depth of 936 feet to a depth of 16,779 feet; that I am authorized and qualified to make this report; that this survey was conducted at the request of Mewbourne Oil Company, for the Red Hills West 21 W1DM Federal Com #002H well, API # **30-025-43427** in Lea County, New Mexico; and that I have reviewed this report and find that it conforms to the principles as set forth by STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.

**Todd Estes**

**STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.**

**STRYKER ENERGY DIRECTIONAL SERVICES, L.L.C.**

**P.O. Box 1250**

**Montgomery, TX 77356**

**Office (936) 582-7296 \* Fax (936)-588-4163**



Microsoft  
MWD Surveys



**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
**Site:** Section 21-26S-32E Red Hills West 21 W1DM Fe  
**Well:** Red Hills West 21 W1DM Fed Com 2H  
**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
**TVD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

**Project** Lea County N.M.

**Map System:** US State Plane 1927 (Exact solution)  
**Geo Datum:** NAD 1927 (NADCON CONUS)  
**Map Zone:** New Mexico East 3001

**System Datum:** Mean Sea Level

**Site** Section 21-26S-32E Red Hills West 21 W1DM Fed Com

|                              |          |                     |                 |                          |                   |
|------------------------------|----------|---------------------|-----------------|--------------------------|-------------------|
| <b>Site Position:</b>        |          | <b>Northing:</b>    | 377,031.00 usft | <b>Latitude:</b>         | 32° 2' 5.719 N    |
| <b>From:</b>                 | Map      | <b>Easting:</b>     | 700,491.90 usft | <b>Longitude:</b>        | 103° 41' 10.806 W |
| <b>Position Uncertainty:</b> | 0.0 usft | <b>Slot Radius:</b> | 13-3/16 "       | <b>Grid Convergence:</b> | 0.34 °            |

**Well** Red Hills West 21 W1DM Fed Com 2H

|                             |              |          |                            |                 |                      |                   |
|-----------------------------|--------------|----------|----------------------------|-----------------|----------------------|-------------------|
| <b>Well Position</b>        | <b>+N/-S</b> | 0.0 usft | <b>Northing:</b>           | 377,031.00 usft | <b>Latitude:</b>     | 32° 2' 5.719 N    |
|                             | <b>+E/-W</b> | 0.0 usft | <b>Easting:</b>            | 700,491.90 usft | <b>Longitude:</b>    | 103° 41' 10.806 W |
| <b>Position Uncertainty</b> |              | 0.0 usft | <b>Wellhead Elevation:</b> | 27.0 usft       | <b>Ground Level:</b> | 3,150.0 usft      |

**Wellbore** Original Hole

| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination<br/>(°)</b> | <b>Dip Angle<br/>(°)</b> | <b>Field Strength<br/>(nT)</b> |
|------------------|-------------------|--------------------|----------------------------|--------------------------|--------------------------------|
|                  | IGRF2015          | 5/16/2017          | 7.00                       | 59.87                    | 47,824.45134646                |

**Design** Original Hole

**Audit Notes:**

|                 |     |               |        |                      |     |
|-----------------|-----|---------------|--------|----------------------|-----|
| <b>Version:</b> | 1.0 | <b>Phase:</b> | ACTUAL | <b>Tie On Depth:</b> | 0.0 |
|-----------------|-----|---------------|--------|----------------------|-----|

| <b>Vertical Section:</b> | <b>Depth From (TVD)<br/>(usft)</b> | <b>+N/-S<br/>(usft)</b> | <b>+E/-W<br/>(usft)</b> | <b>Direction<br/>(°)</b> |
|--------------------------|------------------------------------|-------------------------|-------------------------|--------------------------|
|                          | 0.0                                | 0.0                     | 0.0                     | 97.06                    |

**Survey Program** Date 6/20/2017

| <b>From<br/>(usft)</b> | <b>To<br/>(usft)</b> | <b>Survey (Wellbore)</b>   | <b>Tool Name</b> | <b>Description</b>     |
|------------------------|----------------------|----------------------------|------------------|------------------------|
| 100.0                  | 16,830.0             | MWD Survey (Original Hole) | MWD+IGRF         | OWSG MWD + IGRF or WMM |

Company: Mewbourne Oil Company  
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MD Reference: 3150 + 27 @ 3177.0usft (Patterson 231)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: Stryker\_EDM

Survey

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 0.0          | 0.00       | 0.00                 | 0.0           | 0.0           | 0.0           | 0.0                        | 0.00                   |
| 100.0        | 0.30       | 230.70               | 100.0         | -0.2          | -0.2          | 0.3                        | 230.70                 |
| 160.0        | 0.10       | 25.00                | 160.0         | -0.2          | -0.3          | 0.4                        | 234.20                 |
| 218.0        | 0.60       | 72.00                | 218.0         | -0.1          | 0.0           | 0.1                        | 174.01                 |
| 279.0        | 1.50       | 78.70                | 279.0         | 0.2           | 1.1           | 1.1                        | 80.82                  |
| 337.0        | 1.80       | 72.70                | 337.0         | 0.6           | 2.7           | 2.8                        | 77.58                  |
| 398.0        | 2.50       | 75.70                | 397.9         | 1.2           | 4.9           | 5.1                        | 76.16                  |
| 457.0        | 2.40       | 85.70                | 456.9         | 1.6           | 7.4           | 7.6                        | 77.63                  |
| 517.0        | 2.70       | 82.70                | 516.8         | 1.9           | 10.0          | 10.2                       | 79.32                  |
| 578.0        | 2.20       | 81.70                | 577.8         | 2.2           | 12.6          | 12.8                       | 79.92                  |
| 637.0        | 1.70       | 56.70                | 636.7         | 2.9           | 14.5          | 14.8                       | 78.71                  |
| 696.0        | 1.60       | 59.70                | 695.7         | 3.8           | 15.9          | 16.4                       | 76.63                  |
| 761.0        | 1.60       | 78.70                | 760.7         | 4.4           | 17.6          | 18.1                       | 75.90                  |
| 825.0        | 1.30       | 87.70                | 824.6         | 4.6           | 19.2          | 19.7                       | 76.45 Tie-In to Rig    |
| 936.0        | 1.80       | 81.10                | 935.6         | 4.9           | 22.2          | 22.7                       | 77.43                  |
| 1,031.0      | 1.60       | 92.90                | 1,030.6       | 5.1           | 25.0          | 25.5                       | 78.44                  |
| 1,127.0      | 1.10       | 103.20               | 1,126.5       | 4.8           | 27.2          | 27.6                       | 79.93                  |
| 1,222.0      | 1.00       | 99.90                | 1,221.5       | 4.5           | 28.9          | 29.3                       | 81.19                  |
| 1,317.0      | 0.90       | 105.70               | 1,316.5       | 4.1           | 30.5          | 30.7                       | 82.27                  |
| 1,412.0      | 0.70       | 118.20               | 1,411.5       | 3.7           | 31.7          | 31.9                       | 83.41                  |
| 1,508.0      | 0.70       | 132.30               | 1,507.5       | 3.0           | 32.6          | 32.8                       | 84.77                  |
| 1,603.0      | 0.70       | 146.30               | 1,602.5       | 2.1           | 33.4          | 33.5                       | 86.37                  |
| 1,698.0      | 0.80       | 138.20               | 1,697.5       | 1.1           | 34.1          | 34.2                       | 88.09                  |
| 1,793.0      | 0.90       | 148.20               | 1,792.5       | 0.0           | 35.0          | 35.0                       | 89.98                  |
| 1,891.0      | 0.70       | 148.30               | 1,890.5       | -1.2          | 35.7          | 35.7                       | 91.85                  |
| 1,987.0      | 0.70       | 149.40               | 1,986.5       | -2.2          | 36.3          | 36.4                       | 93.40                  |
| 2,082.0      | 0.50       | 159.20               | 2,081.4       | -3.0          | 36.8          | 36.9                       | 94.74                  |



Microsoft  
MWD Surveys



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MD Reference: 3150 + 27 @ 3177.0usft (Patterson 231)  
North Reference: Grid  
Survey Calculation Method: Minimum Curvature  
Database: Stryker\_EDM

Survey

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 2,177.0      | 0.40       | 145.60               | 2,176.4       | -3.7          | 37.1          | 37.3                       | 95.71                  |
| 2,271.0      | 0.50       | 139.60               | 2,270.4       | -4.3          | 37.5          | 37.8                       | 96.52                  |
| 2,367.0      | 0.60       | 146.70               | 2,366.4       | -5.0          | 38.1          | 38.4                       | 97.52                  |
| 2,462.0      | 0.10       | 230.40               | 2,461.4       | -5.5          | 38.3          | 38.7                       | 98.17                  |
| 2,557.0      | 0.50       | 273.40               | 2,556.4       | -5.5          | 37.8          | 38.2                       | 98.31                  |
| 2,651.0      | 0.70       | 278.90               | 2,650.4       | -5.4          | 36.8          | 37.2                       | 98.36                  |
| 2,746.0      | 0.90       | 270.70               | 2,745.4       | -5.3          | 35.5          | 35.9                       | 98.51                  |
| 2,841.0      | 0.80       | 268.30               | 2,840.4       | -5.3          | 34.1          | 34.5                       | 98.87                  |
| 2,936.0      | 0.80       | 263.00               | 2,935.4       | -5.4          | 32.8          | 33.2                       | 99.39                  |
| 3,032.0      | 0.60       | 227.20               | 3,031.4       | -5.8          | 31.8          | 32.3                       | 100.43                 |
| 3,126.0      | 0.20       | 166.40               | 3,125.4       | -6.3          | 31.4          | 32.1                       | 101.40                 |
| 3,220.0      | 0.20       | 111.60               | 3,219.4       | -6.6          | 31.6          | 32.3                       | 101.72                 |
| 3,315.0      | 0.80       | 68.00                | 3,314.4       | -6.4          | 32.4          | 33.0                       | 101.13                 |
| 3,409.0      | 0.90       | 71.80                | 3,408.4       | -5.9          | 33.7          | 34.2                       | 99.92                  |
| 3,503.0      | 1.00       | 66.20                | 3,502.4       | -5.3          | 35.2          | 35.6                       | 98.63                  |
| 3,597.0      | 0.90       | 59.50                | 3,596.3       | -4.6          | 36.5          | 36.8                       | 97.22                  |
| 3,691.0      | 1.10       | 70.60                | 3,690.3       | -4.0          | 38.0          | 38.2                       | 95.94                  |
| 3,785.0      | 1.20       | 85.70                | 3,784.3       | -3.6          | 39.9          | 40.0                       | 95.13                  |
| 3,880.0      | 1.50       | 82.20                | 3,879.3       | -3.3          | 42.1          | 42.2                       | 94.54                  |
| 3,974.0      | 1.80       | 90.00                | 3,973.2       | -3.2          | 44.8          | 44.9                       | 94.05                  |
| 4,067.0      | 2.10       | 102.90               | 4,066.2       | -3.6          | 47.9          | 48.0                       | 94.24                  |
| 4,162.0      | 1.50       | 131.00               | 4,161.2       | -4.8          | 50.5          | 50.8                       | 95.38                  |
| 4,256.0      | 1.00       | 143.10               | 4,255.1       | -6.2          | 52.0          | 52.3                       | 96.83                  |
| 4,379.0      | 0.40       | 191.90               | 4,378.1       | -7.5          | 52.5          | 53.0                       | 98.13                  |
| 4,473.0      | 1.10       | 101.50               | 4,472.1       | -8.0          | 53.3          | 53.9                       | 98.53                  |
| 4,566.0      | 3.80       | 56.60                | 4,565.0       | -6.5          | 56.8          | 57.1                       | 96.51                  |
| 4,661.0      | 4.70       | 56.50                | 4,659.8       | -2.6          | 62.7          | 62.7                       | 92.38                  |

**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
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**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
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**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

**Survey**

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 4,754.0      | 4.70       | 57.10                | 4,752.5       | 1.6           | 69.0          | 69.0                       | 88.69                  |
| 4,849.0      | 4.30       | 54.70                | 4,847.2       | 5.7           | 75.2          | 75.4                       | 85.63                  |
| 4,944.0      | 4.50       | 54.30                | 4,941.9       | 10.0          | 81.1          | 81.8                       | 82.99                  |
| 5,039.0      | 4.50       | 55.10                | 5,036.6       | 14.3          | 87.2          | 88.4                       | 80.70                  |
| 5,134.0      | 4.40       | 54.70                | 5,131.3       | 18.5          | 93.3          | 95.1                       | 78.76                  |
| 5,229.0      | 4.30       | 54.40                | 5,226.0       | 22.7          | 99.1          | 101.7                      | 77.10                  |
| 5,323.0      | 4.00       | 53.10                | 5,319.8       | 26.7          | 104.6         | 108.0                      | 75.67                  |
| 5,419.0      | 4.00       | 50.30                | 5,415.5       | 30.9          | 109.9         | 114.1                      | 74.30                  |
| 5,513.0      | 4.00       | 47.40                | 5,509.3       | 35.2          | 114.8         | 120.1                      | 72.96                  |
| 5,607.0      | 4.20       | 71.40                | 5,603.1       | 38.5          | 120.5         | 126.5                      | 72.28                  |
| 5,702.0      | 4.40       | 76.90                | 5,697.8       | 40.4          | 127.3         | 133.6                      | 72.38                  |
| 5,797.0      | 4.40       | 76.20                | 5,792.5       | 42.1          | 134.4         | 140.9                      | 72.60                  |
| 5,891.0      | 4.60       | 76.40                | 5,886.2       | 43.9          | 141.6         | 148.2                      | 72.78                  |
| 5,986.0      | 4.50       | 71.30                | 5,980.9       | 46.0          | 148.8         | 155.7                      | 72.83                  |
| 6,080.0      | 4.30       | 68.40                | 6,074.7       | 48.5          | 155.6         | 162.9                      | 72.70                  |
| 6,175.0      | 4.40       | 68.80                | 6,169.4       | 51.1          | 162.3         | 170.1                      | 72.53                  |
| 6,271.0      | 4.30       | 70.60                | 6,265.1       | 53.6          | 169.1         | 177.4                      | 72.41                  |
| 6,366.0      | 3.10       | 56.10                | 6,359.9       | 56.2          | 174.6         | 183.4                      | 72.15                  |
| 6,461.0      | 3.00       | 53.00                | 6,454.8       | 59.2          | 178.7         | 188.3                      | 71.69                  |
| 6,555.0      | 3.30       | 52.50                | 6,548.6       | 62.3          | 182.8         | 193.2                      | 71.19                  |
| 6,650.0      | 3.10       | 53.10                | 6,643.5       | 65.5          | 187.1         | 198.2                      | 70.71                  |
| 6,745.0      | 3.30       | 52.90                | 6,738.3       | 68.7          | 191.3         | 203.2                      | 70.25                  |
| 6,840.0      | 3.30       | 57.50                | 6,833.2       | 71.8          | 195.8         | 208.5                      | 69.86                  |
| 6,935.0      | 3.00       | 53.30                | 6,928.0       | 74.7          | 200.1         | 213.6                      | 69.51                  |
| 7,030.0      | 2.70       | 53.50                | 7,022.9       | 77.6          | 203.9         | 218.1                      | 69.17                  |
| 7,125.0      | 2.70       | 51.30                | 7,117.8       | 80.3          | 207.4         | 222.4                      | 68.84                  |
| 7,221.0      | 2.60       | 52.40                | 7,213.7       | 83.0          | 210.9         | 226.7                      | 68.51                  |



Microsoft  
MWD Surveys



**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
**Site:** Section 21-26S-32E Red Hills West 21 W1DM Fe  
**Well:** Red Hills West 21 W1DM Fed Com 2H  
**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
**TVD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

Survey

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 7,316.0      | 3.10       | 61.20                | 7,308.6       | 85.6          | 214.9         | 231.3                      | 68.28                  |
| 7,412.0      | 3.40       | 67.80                | 7,404.4       | 87.9          | 219.8         | 236.7                      | 68.20                  |
| 7,505.0      | 3.30       | 67.30                | 7,497.3       | 90.0          | 224.8         | 242.1                      | 68.18                  |
| 7,601.0      | 3.20       | 67.30                | 7,593.1       | 92.1          | 229.8         | 247.6                      | 68.16                  |
| 7,697.0      | 3.20       | 68.00                | 7,689.0       | 94.1          | 234.8         | 252.9                      | 68.15                  |
| 7,792.0      | 3.40       | 69.70                | 7,783.8       | 96.1          | 239.9         | 258.4                      | 68.17                  |
| 7,888.0      | 3.40       | 74.00                | 7,879.7       | 97.9          | 245.3         | 264.1                      | 68.25                  |
| 7,983.0      | 3.40       | 77.10                | 7,974.5       | 99.3          | 250.7         | 269.7                      | 68.40                  |
| 8,079.0      | 3.10       | 81.80                | 8,070.3       | 100.3         | 256.1         | 275.0                      | 68.61                  |
| 8,174.0      | 3.80       | 69.50                | 8,165.2       | 101.8         | 261.6         | 280.7                      | 68.74                  |
| 8,268.0      | 3.60       | 71.40                | 8,259.0       | 103.8         | 267.3         | 286.7                      | 68.78                  |
| 8,363.0      | 3.20       | 76.90                | 8,353.8       | 105.3         | 272.7         | 292.3                      | 68.88                  |
| 8,459.0      | 3.80       | 62.40                | 8,449.6       | 107.4         | 278.1         | 298.1                      | 68.88                  |
| 8,554.0      | 2.70       | 56.80                | 8,544.5       | 110.1         | 282.8         | 303.5                      | 68.73                  |
| 8,649.0      | 2.00       | 55.80                | 8,639.4       | 112.3         | 286.0         | 307.3                      | 68.57                  |
| 8,744.0      | 2.20       | 36.50                | 8,734.3       | 114.7         | 288.5         | 310.4                      | 68.32                  |
| 8,839.0      | 1.80       | 39.40                | 8,829.3       | 117.3         | 290.5         | 313.3                      | 68.02                  |
| 8,934.0      | 1.80       | 28.40                | 8,924.2       | 119.7         | 292.2         | 315.8                      | 67.71                  |
| 9,027.0      | 2.50       | 33.80                | 9,017.2       | 122.7         | 294.0         | 318.6                      | 67.34                  |
| 9,122.0      | 4.40       | 44.70                | 9,112.0       | 127.0         | 297.7         | 323.7                      | 66.89                  |
| 9,217.0      | 3.90       | 33.90                | 9,206.7       | 132.3         | 302.1         | 329.8                      | 66.35                  |
| 9,311.0      | 3.00       | 45.60                | 9,300.6       | 136.7         | 305.6         | 334.8                      | 65.91                  |
| 9,406.0      | 3.10       | 54.30                | 9,395.4       | 139.9         | 309.5         | 339.6                      | 65.67                  |
| 9,501.0      | 4.00       | 63.30                | 9,490.2       | 142.9         | 314.5         | 345.5                      | 65.57                  |
| 9,596.0      | 3.70       | 61.50                | 9,585.0       | 145.8         | 320.2         | 351.8                      | 65.51                  |
| 9,692.0      | 1.90       | 58.20                | 9,680.9       | 148.2         | 324.3         | 356.5                      | 65.44                  |
| 9,787.0      | 2.10       | 69.30                | 9,775.9       | 149.6         | 327.2         | 359.8                      | 65.43                  |



Microsoft  
MWD Surveys



**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
**Site:** Section 21-26S-32E Red Hills West 21 W1DM Fe  
**Well:** Red Hills West 21 W1DM Fed Com 2H  
**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
**TVD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

**Survey**

| MD<br>(usft)                                | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|---------------------------------------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 9,882.0                                     | 2.50       | 65.80                | 9,870.8       | 151.1         | 330.7         | 363.6                      | 65.45                  |
| 9,978.0                                     | 3.60       | 83.60                | 9,966.6       | 152.3         | 335.6         | 368.6                      | 65.60                  |
| 10,074.0                                    | 3.70       | 78.10                | 10,062.5      | 153.2         | 341.7         | 374.5                      | 65.84                  |
| 10,170.0                                    | 3.30       | 77.70                | 10,158.3      | 154.5         | 347.4         | 380.2                      | 66.03                  |
| 10,265.0                                    | 1.90       | 86.80                | 10,253.2      | 155.1         | 351.6         | 384.3                      | 66.19                  |
| 10,360.0                                    | 2.60       | 82.80                | 10,348.1      | 155.5         | 355.4         | 387.9                      | 66.37                  |
| 10,455.0                                    | 2.90       | 80.40                | 10,443.0      | 156.2         | 359.9         | 392.3                      | 66.54                  |
| 10,550.0                                    | 2.30       | 90.20                | 10,537.9      | 156.6         | 364.1         | 396.4                      | 66.73                  |
| 10,646.0                                    | 2.00       | 84.10                | 10,633.8      | 156.7         | 367.7         | 399.7                      | 66.92                  |
| 10,740.0                                    | 3.50       | 75.70                | 10,727.7      | 157.6         | 372.1         | 404.1                      | 67.05                  |
| 10,836.0                                    | 3.90       | 77.50                | 10,823.5      | 159.0         | 378.2         | 410.3                      | 67.19                  |
| 10,931.0                                    | 3.10       | 82.30                | 10,918.3      | 160.1         | 383.9         | 415.9                      | 67.36                  |
| 11,026.0                                    | 3.80       | 82.70                | 11,013.2      | 160.8         | 389.5         | 421.4                      | 67.57                  |
| 11,121.0                                    | 3.90       | 83.40                | 11,107.9      | 161.6         | 395.9         | 427.6                      | 67.79                  |
| 11,217.0                                    | 3.70       | 91.60                | 11,203.7      | 161.9         | 402.2         | 433.6                      | 68.08                  |
| 11,312.0                                    | 3.40       | 86.80                | 11,298.6      | 162.0         | 408.1         | 439.1                      | 68.35                  |
| 11,408.0                                    | 3.30       | 93.20                | 11,394.4      | 162.0         | 413.7         | 444.3                      | 68.62                  |
| 11,439.9                                    | 3.19       | 95.29                | 11,426.2      | 161.8         | 415.5         | 445.9                      | 68.72                  |
| <b>BB Red Hills West 21 W1DM Fed Com 2H</b> |            |                      |               |               |               |                            |                        |
| 11,497.0                                    | 3.00       | 99.40                | 11,483.3      | 161.4         | 418.5         | 448.6                      | 68.91                  |
| 11,530.0                                    | 2.90       | 100.10               | 11,516.2      | 161.2         | 420.2         | 450.1                      | 69.02                  |
| 11,561.0                                    | 3.30       | 103.20               | 11,547.2      | 160.8         | 421.9         | 451.5                      | 69.13                  |
| 11,593.0                                    | 4.90       | 133.50               | 11,579.1      | 159.7         | 423.7         | 452.8                      | 69.35                  |
| 11,625.0                                    | 7.70       | 152.70               | 11,610.9      | 156.8         | 425.7         | 453.7                      | 69.78                  |
| 11,657.0                                    | 11.80      | 159.70               | 11,642.4      | 151.8         | 427.8         | 454.0                      | 70.46                  |
| 11,689.0                                    | 16.20      | 163.00               | 11,673.5      | 144.5         | 430.3         | 453.9                      | 71.44                  |
| 11,721.0                                    | 19.60      | 162.70               | 11,703.9      | 135.1         | 433.2         | 453.8                      | 72.68                  |



Microsoft  
MWD Surveys



**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
**Site:** Section 21-26S-32E Red Hills West 21 W1DM Fe  
**Well:** Red Hills West 21 W1DM Fed Com 2H  
**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
**TVD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

Survey

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 11,753.0     | 23.50      | 166.70               | 11,733.7      | 123.8         | 436.3         | 453.5                      | 74.16                  |
| 11,784.0     | 27.10      | 170.90               | 11,761.7      | 110.8         | 438.8         | 452.6                      | 75.83                  |
| 11,816.0     | 30.90      | 171.30               | 11,789.7      | 95.4          | 441.2         | 451.4                      | 77.79                  |
| 11,848.0     | 36.00      | 171.90               | 11,816.4      | 78.0          | 443.8         | 450.6                      | 80.03                  |
| 11,880.0     | 39.50      | 174.70               | 11,841.7      | 58.5          | 446.0         | 449.8                      | 82.52                  |
| 11,911.0     | 42.30      | 178.10               | 11,865.1      | 38.3          | 447.3         | 448.9                      | 85.11                  |
| 11,943.0     | 46.90      | 180.40               | 11,887.9      | 15.8          | 447.6         | 447.8                      | 87.97                  |
| 11,975.0     | 51.40      | 181.10               | 11,908.8      | -8.4          | 447.2         | 447.3                      | 91.07                  |
| 12,007.0     | 54.30      | 181.80               | 11,928.1      | -33.9         | 446.6         | 447.9                      | 94.33                  |
| 12,038.0     | 57.40      | 182.40               | 11,945.5      | -59.5         | 445.6         | 449.6                      | 97.60                  |
| 12,070.0     | 59.80      | 182.50               | 11,962.2      | -86.8         | 444.5         | 452.9                      | 101.05                 |
| 12,102.0     | 62.20      | 182.40               | 11,977.7      | -114.7        | 443.3         | 457.9                      | 104.51                 |
| 12,134.0     | 65.50      | 182.00               | 11,991.8      | -143.4        | 442.2         | 464.9                      | 107.97                 |
| 12,166.0     | 69.90      | 181.70               | 12,004.0      | -173.0        | 441.2         | 473.9                      | 111.41                 |
| 12,198.0     | 71.60      | 179.50               | 12,014.5      | -203.2        | 440.9         | 485.5                      | 114.75                 |
| 12,261.0     | 74.70      | 181.40               | 12,032.8      | -263.5        | 440.4         | 513.2                      | 120.89                 |
| 12,292.0     | 75.90      | 180.40               | 12,040.6      | -293.5        | 440.0         | 528.9                      | 123.71                 |
| 12,324.0     | 77.80      | 179.40               | 12,047.9      | -324.6        | 440.0         | 546.8                      | 126.42                 |
| 12,356.0     | 79.30      | 179.10               | 12,054.3      | -356.0        | 440.4         | 566.3                      | 128.95                 |
| 12,387.0     | 80.60      | 178.90               | 12,059.7      | -386.5        | 441.0         | 586.4                      | 131.24                 |
| 12,419.0     | 82.80      | 178.10               | 12,064.3      | -418.2        | 441.8         | 608.3                      | 133.43                 |
| 12,450.0     | 84.90      | 178.10               | 12,067.6      | -449.0        | 442.8         | 630.6                      | 135.40                 |
| 12,482.0     | 87.80      | 178.40               | 12,069.7      | -480.9        | 443.8         | 654.4                      | 137.30                 |
| 12,514.0     | 91.20      | 178.00               | 12,069.9      | -512.9        | 444.8         | 678.9                      | 139.07                 |
| 12,546.0     | 92.20      | 178.00               | 12,069.0      | -544.8        | 445.9         | 704.0                      | 140.70                 |
| 12,577.0     | 91.50      | 178.20               | 12,068.0      | -575.8        | 446.9         | 728.9                      | 142.18                 |

**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
**Site:** Section 21-26S-32E Red Hills West 21 W1DM Fe  
**Well:** Red Hills West 21 W1DM Fed Com 2H  
**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
**TVD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

**Survey**

| MD<br>(usft)                         | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|--------------------------------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 12,586.0                             | 91.58      | 178.37               | 12,067.7      | -584.8        | 447.2         | 736.2                      | 142.60                 |
| LP Red Hills West 21 W1DM Fed Com 2H |            |                      |               |               |               |                            |                        |
| 12,609.0                             | 91.80      | 178.80               | 12,067.1      | -607.8        | 447.8         | 754.9                      | 143.62                 |
| 12,641.0                             | 92.60      | 179.50               | 12,065.8      | -639.8        | 448.2         | 781.2                      | 144.98                 |
| 12,672.0                             | 93.00      | 179.50               | 12,064.3      | -670.7        | 448.5         | 806.9                      | 146.23                 |
| 12,704.0                             | 93.10      | 180.00               | 12,062.6      | -702.7        | 448.7         | 833.7                      | 147.44                 |
| 12,736.0                             | 93.90      | 180.00               | 12,060.7      | -734.6        | 448.7         | 860.8                      | 148.59                 |
| 12,767.0                             | 93.80      | 180.10               | 12,058.6      | -765.5        | 448.6         | 887.3                      | 149.63                 |
| 12,799.0                             | 93.70      | 181.10               | 12,056.5      | -797.5        | 448.3         | 914.8                      | 150.66                 |
| 12,831.0                             | 93.70      | 181.60               | 12,054.4      | -829.4        | 447.5         | 942.4                      | 151.65                 |
| 12,863.0                             | 93.50      | 181.40               | 12,052.4      | -861.3        | 446.7         | 970.3                      | 152.59                 |
| 12,895.0                             | 91.30      | 181.30               | 12,051.1      | -893.3        | 446.0         | 998.4                      | 153.47                 |
| 12,958.0                             | 91.40      | 181.40               | 12,049.6      | -956.2        | 444.5         | 1,054.5                    | 155.07                 |
| 13,053.0                             | 90.10      | 181.10               | 12,048.3      | -1,051.2      | 442.4         | 1,140.5                    | 157.18                 |
| 13,148.0                             | 90.70      | 181.40               | 12,047.7      | -1,146.2      | 440.3         | 1,227.9                    | 158.99                 |
| 13,243.0                             | 89.50      | 180.90               | 12,047.5      | -1,241.2      | 438.4         | 1,316.3                    | 160.55                 |
| 13,339.0                             | 89.10      | 181.00               | 12,048.7      | -1,337.1      | 436.8         | 1,406.7                    | 161.91                 |
| 13,434.0                             | 92.20      | 180.90               | 12,047.6      | -1,432.1      | 435.2         | 1,496.8                    | 163.09                 |
| 13,529.0                             | 92.90      | 181.00               | 12,043.4      | -1,527.0      | 433.7         | 1,587.4                    | 164.15                 |
| 13,625.0                             | 92.20      | 180.20               | 12,039.1      | -1,622.9      | 432.7         | 1,679.6                    | 165.07                 |
| 13,720.0                             | 91.40      | 180.00               | 12,036.1      | -1,717.9      | 432.5         | 1,771.5                    | 165.87                 |
| 13,815.0                             | 90.90      | 180.10               | 12,034.2      | -1,812.8      | 432.4         | 1,863.7                    | 166.58                 |
| 13,910.0                             | 90.60      | 180.30               | 12,033.0      | -1,907.8      | 432.1         | 1,956.1                    | 167.24                 |
| 14,006.0                             | 90.20      | 179.70               | 12,032.3      | -2,003.8      | 432.1         | 2,049.9                    | 167.83                 |
| 14,101.0                             | 91.30      | 180.60               | 12,031.1      | -2,098.8      | 431.8         | 2,142.8                    | 168.37                 |
| 14,196.0                             | 91.30      | 181.00               | 12,028.9      | -2,193.8      | 430.5         | 2,235.6                    | 168.90                 |
| 14,291.0                             | 90.30      | 181.20               | 12,027.6      | -2,288.8      | 428.7         | 2,328.6                    | 169.39                 |

**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
**Site:** Section 21-26S-32E Red Hills West 21 W1DM Fe  
**Well:** Red Hills West 21 W1DM Fed Com 2H  
**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
**TVD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

**Survey**

| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|--------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 14,386.0     | 89.80      | 180.40               | 12,027.5      | -2,383.7      | 427.4         | 2,421.7                    | 169.84                 |
| 14,481.0     | 92.20      | 182.70               | 12,025.8      | -2,478.7      | 424.8         | 2,514.8                    | 170.28                 |
| 14,576.0     | 91.80      | 182.70               | 12,022.5      | -2,573.5      | 420.3         | 2,607.6                    | 170.72                 |
| 14,671.0     | 88.80      | 182.20               | 12,022.0      | -2,668.4      | 416.3         | 2,700.7                    | 171.13                 |
| 14,766.0     | 88.10      | 181.60               | 12,024.6      | -2,763.3      | 413.1         | 2,794.0                    | 171.50                 |
| 14,861.0     | 87.50      | 181.70               | 12,028.3      | -2,858.2      | 410.4         | 2,887.5                    | 171.83                 |
| 14,956.0     | 86.20      | 181.70               | 12,033.5      | -2,953.0      | 407.6         | 2,981.0                    | 172.14                 |
| 15,051.0     | 88.50      | 179.40               | 12,037.9      | -3,047.9      | 406.7         | 3,074.9                    | 172.40                 |
| 15,145.0     | 89.30      | 178.30               | 12,039.7      | -3,141.9      | 408.5         | 3,168.3                    | 172.59                 |
| 15,240.0     | 90.90      | 178.80               | 12,039.5      | -3,236.8      | 411.0         | 3,262.8                    | 172.76                 |
| 15,335.0     | 88.60      | 178.90               | 12,039.9      | -3,331.8      | 412.9         | 3,357.3                    | 172.94                 |
| 15,431.0     | 88.50      | 178.70               | 12,042.3      | -3,427.8      | 414.9         | 3,452.8                    | 173.10                 |
| 15,526.0     | 89.10      | 179.60               | 12,044.3      | -3,522.7      | 416.3         | 3,547.2                    | 173.26                 |
| 15,621.0     | 90.20      | 180.50               | 12,044.9      | -3,617.7      | 416.2         | 3,641.6                    | 173.44                 |
| 15,716.0     | 87.10      | 180.40               | 12,047.2      | -3,712.7      | 415.4         | 3,735.9                    | 173.62                 |
| 15,811.0     | 90.90      | 180.10               | 12,048.8      | -3,807.7      | 415.0         | 3,830.2                    | 173.78                 |
| 15,906.0     | 93.00      | 181.50               | 12,045.6      | -3,902.6      | 413.7         | 3,924.4                    | 173.95                 |
| 16,000.0     | 92.60      | 180.40               | 12,041.0      | -3,996.5      | 412.2         | 4,017.6                    | 174.11                 |
| 16,094.0     | 89.50      | 180.90               | 12,039.3      | -4,090.4      | 411.1         | 4,111.0                    | 174.26                 |
| 16,190.0     | 90.90      | 181.70               | 12,038.9      | -4,186.4      | 408.9         | 4,206.3                    | 174.42                 |
| 16,285.0     | 86.20      | 181.60               | 12,041.3      | -4,281.3      | 406.2         | 4,300.5                    | 174.58                 |
| 16,380.0     | 86.70      | 181.30               | 12,047.2      | -4,376.1      | 403.8         | 4,394.7                    | 174.73                 |
| 16,474.0     | 88.90      | 180.90               | 12,050.8      | -4,470.0      | 402.0         | 4,488.0                    | 174.86                 |
| 16,568.0     | 91.00      | 180.70               | 12,050.9      | -4,564.0      | 400.7         | 4,581.5                    | 174.98                 |
| 16,663.0     | 88.40      | 181.10               | 12,051.4      | -4,659.0      | 399.2         | 4,676.0                    | 175.10                 |
| 16,758.0     | 88.50      | 181.20               | 12,054.0      | -4,753.9      | 397.3         | 4,770.5                    | 175.22                 |
| 16,779.0     | 89.70      | 181.50               | 12,054.3      | -4,774.9      | 396.8         | 4,791.3                    | 175.25                 |

**Company:** Mewbourne Oil Company  
**Project:** Lea County N.M.  
**Site:** Section 21-26S-32E Red Hills West 21 W1DM Fe  
**Well:** Red Hills West 21 W1DM Fed Com 2H  
**Wellbore:** Original Hole  
**Design:** Original Hole

**Local Co-ordinate Reference:** Well Red Hills West 21 W1DM Fed Com 2H  
**TVD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**MD Reference:** 3150 + 27 @ 3177.0usft (Patterson 231)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** Stryker\_EDM

**Survey**

| MD<br>(usft)                                 | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) |
|----------------------------------------------|------------|----------------------|---------------|---------------|---------------|----------------------------|------------------------|
| 16,829.9                                     | 89.70      | 181.50               | 12,054.6      | -4,825.8      | 395.4         | 4,842.0                    | 175.32                 |
| <b>PBHL Red Hills West 21 W1DM Fed Com2H</b> |            |                      |               |               |               |                            |                        |
| 16,830.0                                     | 89.70      | 181.50               | 12,054.6      | -4,825.9      | 395.4         | 4,842.0                    | 175.32                 |
| <b>16830' MD Projected to Bit</b>            |            |                      |               |               |               |                            |                        |

**Survey Annotations**

| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                    |
|-----------------------------|-----------------------------|-------------------|-----------------|----------------------------|
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                            |
| 16,830.0                    | 12,054.6                    | -4,825.9          | 395.4           | 16830' MD Projected to Bit |