

**District I**  
1625 N. French Dr., Hobbs, NM 88240  
Phone: (575) 393-6161 Fax: (575) 393-0720

**District II**  
811 S. First St., Artesia, NM 88210  
Phone: (575) 748-1283 Fax: (575) 748-9720

**District III**  
1000 Rio Brazos Road, Aztec, NM 87410  
Phone: (505) 334-6178 Fax: (505) 334-6170

**District IV**  
1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico  
Energy, Minerals & Natural Resources Department  
OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

RECEIVED  
JAN 09 2020

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

☒ AMENDED REPORT  
As-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

|                                         |                                                        |                                                       |
|-----------------------------------------|--------------------------------------------------------|-------------------------------------------------------|
| <sup>1</sup> API Number<br>30-015-45348 | <sup>2</sup> Pool Code<br>98220                        | <sup>3</sup> Pool Name<br>PURPLE SAGE; WOLFCAMP (GAS) |
| <sup>4</sup> Property Code<br>325374    | Property Name<br>RICK DECKARD 4 WXY STATE              |                                                       |
| <sup>7</sup> OGRID No.<br>372098        | <sup>8</sup> Operator Name<br>MARATHON OIL PERMIAN LLC | <sup>6</sup> Well Number<br>8H                        |
|                                         |                                                        | <sup>9</sup> Elevation<br>3002'                       |

| UL or lot no.                                                | Section                       | Township                         | Range                   | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
|--------------------------------------------------------------|-------------------------------|----------------------------------|-------------------------|---------|---------------|------------------|---------------|----------------|--------|
| C                                                            | 4                             | T25S                             | R28E                    |         | 820           | NORTH            | 1712          | WEST           | EDDY   |
| <sup>10</sup> Surface Location                               |                               |                                  |                         |         |               |                  |               |                |        |
| UL or lot no.                                                | Section                       | Township                         | Range                   | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County |
| N                                                            | 4                             | T25S                             | R28E                    |         | 287           | SOUTH            | 1661          | WEST           | EDDY   |
| <sup>11</sup> Bottom Hole Location If Different From Surface |                               |                                  |                         |         |               |                  |               |                |        |
| <sup>12</sup> Dedicated Acres<br>321.12                      | <sup>13</sup> Joint or Infill | <sup>14</sup> Consolidation Code | <sup>15</sup> Order No. |         |               |                  |               |                |        |

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

|                                                                                                                                                                                                                                                                                            |  |                                                                                                                                                                                                                                                                                            |  |                                                                           |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>SECTION 32</b></p> <p><b>SECTION 5</b></p> <p><b>SECTION 8</b></p> <p><b>CORNER COORDINATES</b><br/>NAD 83, SPCS NH EAST<br/>A - X: 613221.63' / Y: 424390.57'<br/>B - X: 615881.69' / Y: 424391.91'<br/>C - X: 615885.84' / Y: 419047.50'<br/>D - X: 613206.84' / Y: 419074.98'</p> |  | <p><b>SECTION 33</b></p> <p><b>SECTION 4</b></p> <p><b>SECTION 9</b></p> <p><b>CORNER COORDINATES</b><br/>NAD 83, SPCS NH EAST<br/>A - X: 572037.93' / Y: 424332.44'<br/>B - X: 574697.93' / Y: 424333.75'<br/>C - X: 574701.96' / Y: 418989.44'<br/>D - X: 572023.03' / Y: 419016.96'</p> |  | <p><b>SECTION 34</b></p> <p><b>SECTION 3</b></p> <p><b>SECTION 10</b></p> |  | <p><b>17 OPERATOR CERTIFICATION</b></p> <p>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p>Signature: <i>Adrian Covarrubias</i> Date: 12/13/2019</p> <p>Printed Name: Adrian Covarrubias</p> <p>E-mail Address:</p> <p><b>18 SURVEYOR CERTIFICATION</b></p> <p>I hereby certify that the well surface location shown on this plat was plotted from field notes of the as-staked surveys made by me or under my supervision, and that the same is true and correct to the best of my belief. Data used for underground measurements were provided by others for reference only and does not constitute field measurements performed by R-Squared Global.</p> <p>DECEMBER 12, 2019</p> <p>Date of Survey</p> <p>Signature and Seal of Professional Surveyor: <i>David W. Myers</i></p> <p>Certificate Number: DAVID W. MYERS 11403</p> |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 0.999918284  
CONVERGENCE: 0.1266074566; NOTE: ALL DIMENSIONS IN U.S. FEET

|      |            |     |
|------|------------|-----|
| 1    | 12/12/2019 | DEF |
| REV. | DATE       | BY  |

SHEET 1 OF 1  
JOB No. R3889\_009



**PRODIRECTIONAL**

RECEIVED

JAN 09 2020

EMNRD-OCD ARTESIA



# Marathon Oil Corporation

**Rick Deckard State 25-28-4 WXY No. 8H  
Eddy County, NM**

**June 13, 2019**

**Job# LNM1444019  
API# 30-015-45348**

## Survey Completion Report



PRODIRECTIONAL

## Survey Certification Letter

June 13, 2019



**Marathon Oil**  
Corporation

Operator Name: Marathon Oil  
Well Name: Rick Deckard State 25-28-4 WXY No. 8H  
County/Parish: Eddy County,  
State: NM  
Rig Name: Precision 594  
Job Number: LNM1444019

This is to certify the surveys performed on the referenced well by Professional Directional Ent., Inc. are true and correct MWD Surveys, data provided as follows:

| Surveyor       | Surveyed Depths      | Projection to Bit | Dates Performed     | Type of Survey |
|----------------|----------------------|-------------------|---------------------|----------------|
| ProDirectional | 510' MD – 14,197' MD | 14,267' MD        | 05/04/19 – 05/14/19 | MWD            |

Sincerely,

Mike Coats  
Regulatory Specialist  
Professional Directional

850 Conroe Park West Drive | Conroe, TX 77303 | Phone: 936.441.7266

[prodirectional.com](http://prodirectional.com)

*The Standard of Excellence in Directional Supervision*



# Marathon Oil

## **Marathon Oil**

Eddy County, NM

Rick Deckard State 25-28-4 WXY

No. 8H

OH

**Survey: ProDirectional**

## **Survey Report**

13 June, 2019



|                  |                                |                                     |                    |
|------------------|--------------------------------|-------------------------------------|--------------------|
| <b>Company:</b>  | Marathon Oil                   | <b>Local Co-ordinate Reference:</b> | Well No. 8H        |
| <b>Project:</b>  | Eddy County, NM(NAD 83)        | <b>TVD Reference:</b>               | Well @ 3027.00usft |
| <b>Site:</b>     | Rick Deckard State 25-28-4 WXY | <b>MD Reference:</b>                | Well @ 3027.00usft |
| <b>Well:</b>     | No. 8H                         | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                             | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | MWD-90°-14197', PTB: 14267'    | <b>Database:</b>                    | WellPlanner1       |

|                    |                           |                      |                |
|--------------------|---------------------------|----------------------|----------------|
| <b>Project</b>     | Eddy County, NM(NAD 83)   |                      |                |
| <b>Map System:</b> | US State Plane 1983       | <b>System Datum:</b> | Mean Sea Level |
| <b>Geo Datum:</b>  | North American Datum 1983 |                      |                |
| <b>Map Zone:</b>   | New Mexico Eastern Zone   |                      |                |

|                              |                                |                          |                 |
|------------------------------|--------------------------------|--------------------------|-----------------|
| <b>Site</b>                  | Rick Deckard State 25-28-4 WXY |                          |                 |
| <b>Site Position:</b>        |                                | <b>Northing:</b>         | 419,553.09 usft |
| <b>From:</b>                 | Map                            | <b>Easting:</b>          | 617,306.90 usft |
| <b>Position Uncertainty:</b> | 0.00 usft                      | <b>Slot Radius:</b>      | 13-3/16 "       |
|                              |                                | <b>Latitude:</b>         | 32.153192       |
|                              |                                | <b>Longitude:</b>        | -104.087853     |
|                              |                                | <b>Grid Convergence:</b> | 0.13 °          |

|                      |        |           |                     |                 |               |               |
|----------------------|--------|-----------|---------------------|-----------------|---------------|---------------|
| Well                 | No. 8H |           |                     |                 |               |               |
| Well Position        | +N/-S  | 0.00 usft | Northing:           | 423,571.67 usft | Latitude:     | 32.164253     |
|                      | +E/-W  | 0.00 usft | Easting:            | 614,931.29 usft | Longitude:    | -104.095500   |
| Position Uncertainty |        | 0.00 usft | Wellhead Elevation: | usft            | Ground Level: | 3,002.00 usft |

|                  |                   |                    |                    |                  |                       |  |
|------------------|-------------------|--------------------|--------------------|------------------|-----------------------|--|
| <b>Wellbore</b>  | OH                |                    |                    |                  |                       |  |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b> | <b>Dip Angle</b> | <b>Field Strength</b> |  |
|                  | HDGM              | 4/10/2019          | (°)                | (°)              | (nT)                  |  |
|                  |                   |                    | 7.12               | 59.88            | 47,886.80             |  |

|                          |                             |               |              |                      |      |
|--------------------------|-----------------------------|---------------|--------------|----------------------|------|
| <b>Design</b>            | MWD-90°-14197', PTB: 14267' |               |              |                      |      |
| <b>Audit Notes:</b>      |                             |               |              |                      |      |
| <b>Version:</b>          | 1.0                         | <b>Phase:</b> | ACTUAL       | <b>Tie On Depth:</b> | 0.00 |
| <b>Vertical Section:</b> | <b>Depth From (TVD)</b>     | <b>+N/-S</b>  | <b>+E/-W</b> | <b>Direction</b>     |      |
|                          | (usft)                      | (usft)        | (usft)       | (°)                  |      |
|                          | 0.00                        | 0.00          | 0.00         | 180.06               |      |

|                  |                                |                                     |                    |
|------------------|--------------------------------|-------------------------------------|--------------------|
| <b>Company:</b>  | Marathon Oil                   | <b>Local Co-ordinate Reference:</b> | Well No. 8H        |
| <b>Project:</b>  | Eddy County, NM(NAD 83)        | <b>TVD Reference:</b>               | Well @ 3027.00usft |
| <b>Site:</b>     | Rick Deckard State 25-28-4 WXY | <b>MD Reference:</b>                | Well @ 3027.00usft |
| <b>Well:</b>     | No. 8H                         | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                             | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | MWD-90'-14197', PTB: 14267'    | <b>Database:</b>                    | WellPlanner1       |

| Survey Program |           | Date 6/13/2019    |            |                 |
|----------------|-----------|-------------------|------------|-----------------|
| From (usft)    | To (usft) | Survey (Wellbore) | Tool Name  | Description     |
| 90.00          | 410.00    | Survey #1 (OH)    | MWD - OWSG | MWD - OWSG      |
| 510.00         | 14,267.00 | Survey #2 (OH)    | MWD+HDGM   | OWSG MWD + HRGM |

| MD (usft)                            | Inc (°) | Azi (azimuth) (°) | TVD (usft) | V. Sec (usft) | N/S (usft) | E/W (usft) | Closure Distance (usft) | Closure Azimuth (°) | Northing (usft) | Easting (usft) |
|--------------------------------------|---------|-------------------|------------|---------------|------------|------------|-------------------------|---------------------|-----------------|----------------|
| 0.00                                 | 0.00    | 0.00              | 0.00       | 0.00          | 0.00       | 0.00       | 0.00                    | 0.00                | 423,571.67      | 614,931.29     |
| 90.00                                | 0.90    | 306.87            | 90.00      | -0.42         | 0.42       | -0.57      | 0.71                    | 306.87              | 423,572.09      | 614,930.72     |
| 180.00                               | 0.80    | 287.87            | 179.99     | -1.04         | 1.04       | -1.73      | 2.02                    | 301.05              | 423,572.71      | 614,929.56     |
| 262.00                               | 0.60    | 301.87            | 261.98     | -1.44         | 1.44       | -2.64      | 3.01                    | 298.68              | 423,573.11      | 614,928.65     |
| 357.00                               | 0.70    | 259.87            | 356.97     | -1.60         | 1.60       | -3.63      | 3.97                    | 293.83              | 423,573.27      | 614,927.66     |
| 410.00                               | 0.50    | 313.87            | 409.97     | -1.70         | 1.71       | -4.12      | 4.46                    | 292.52              | 423,573.38      | 614,927.17     |
| 510.00                               | 0.50    | 315.10            | 509.97     | -2.31         | 2.32       | -4.74      | 5.28                    | 296.07              | 423,573.99      | 614,926.55     |
| <b>Pro MWD First Survey: 510' MD</b> |         |                   |            |               |            |            |                         |                     |                 |                |
| 600.00                               | 1.00    | 323.50            | 599.96     | -3.22         | 3.23       | -5.48      | 6.36                    | 300.48              | 423,574.90      | 614,925.81     |
| 691.00                               | 1.20    | 29.20             | 690.95     | -4.69         | 4.70       | -5.49      | 7.23                    | 310.55              | 423,576.37      | 614,925.80     |
| 782.00                               | 2.00    | 43.40             | 781.91     | -6.68         | 6.68       | -3.94      | 7.76                    | 329.51              | 423,578.35      | 614,927.35     |
| 874.00                               | 2.20    | 32.20             | 873.85     | -9.34         | 9.34       | -1.89      | 9.53                    | 348.55              | 423,581.01      | 614,929.40     |
| 966.00                               | 1.70    | 33.60             | 965.80     | -11.98        | 11.98      | -0.20      | 11.98                   | 359.06              | 423,583.65      | 614,931.09     |
| 1,057.00                             | 1.50    | 29.00             | 1,056.76   | -14.14        | 14.14      | 1.13       | 14.19                   | 4.56                | 423,585.81      | 614,932.42     |
| 1,147.00                             | 1.70    | 31.20             | 1,146.73   | -16.32        | 16.31      | 2.39       | 16.49                   | 8.34                | 423,587.98      | 614,933.68     |
| 1,236.00                             | 2.20    | 32.40             | 1,235.67   | -18.89        | 18.89      | 3.99       | 19.30                   | 11.93               | 423,590.56      | 614,935.28     |
| 1,325.00                             | 1.90    | 24.70             | 1,324.62   | -21.67        | 21.67      | 5.52       | 22.36                   | 14.30               | 423,593.34      | 614,936.81     |
| 1,415.00                             | 1.40    | 11.00             | 1,414.58   | -24.11        | 24.10      | 6.36       | 24.93                   | 14.77               | 423,595.77      | 614,937.65     |
| 1,504.00                             | 1.70    | 8.30              | 1,503.55   | -26.48        | 26.48      | 6.75       | 27.32                   | 14.31               | 423,598.15      | 614,938.04     |
| 1,593.00                             | 1.90    | 350.50            | 1,592.50   | -29.24        | 29.24      | 6.70       | 30.00                   | 12.91               | 423,600.91      | 614,937.99     |
| 1,683.00                             | 1.40    | 335.30            | 1,682.47   | -31.71        | 31.71      | 6.00       | 32.27                   | 10.71               | 423,603.38      | 614,937.29     |



# ProDirectional Survey Report



|                  |                                |                                     |                    |
|------------------|--------------------------------|-------------------------------------|--------------------|
| <b>Company:</b>  | Marathon Oil                   | <b>Local Co-ordinate Reference:</b> | Well No. 8H        |
| <b>Project:</b>  | Eddy County, NM(NAD 83)        | <b>TVD Reference:</b>               | Well @ 3027.00usft |
| <b>Site:</b>     | Rick Deckard State 25-28-4 WXY | <b>MD Reference:</b>                | Well @ 3027.00usft |
| <b>Well:</b>     | No. 8H                         | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                             | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | MWD-90'-14197', PTB: 14267'    | <b>Database:</b>                    | WellPlanner1       |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 1,773.00     | 1.50       | 50.70                | 1,772.44      | -33.46           | 33.45         | 6.45          | 34.07                      | 10.91                  | 423,605.12         | 614,937.74        |  |
| 1,862.00     | 3.30       | 73.60                | 1,861.36      | -34.92           | 34.91         | 9.81          | 36.27                      | 15.69                  | 423,606.58         | 614,941.10        |  |
| 1,952.00     | 3.60       | 57.30                | 1,951.20      | -37.19           | 37.17         | 14.67         | 39.96                      | 21.54                  | 423,608.84         | 614,945.96        |  |
| 2,041.00     | 4.00       | 30.10                | 2,040.02      | -41.39           | 41.37         | 18.58         | 45.35                      | 24.18                  | 423,613.04         | 614,949.87        |  |
| 2,130.00     | 5.00       | 15.50                | 2,128.74      | -47.81           | 47.79         | 21.17         | 52.27                      | 23.89                  | 423,619.46         | 614,952.46        |  |
| 2,219.00     | 5.30       | 5.40                 | 2,217.38      | -55.64           | 55.62         | 22.59         | 60.04                      | 22.11                  | 423,627.29         | 614,953.88        |  |
| 2,309.00     | 6.70       | 350.90               | 2,306.89      | -64.97           | 64.94         | 22.16         | 68.62                      | 18.84                  | 423,636.61         | 614,953.45        |  |
| 2,398.00     | 9.50       | 344.00               | 2,395.00      | -77.15           | 77.13         | 19.31         | 79.51                      | 14.05                  | 423,648.80         | 614,950.60        |  |
| 2,429.00     | 9.40       | 343.90               | 2,425.58      | -82.04           | 82.03         | 17.90         | 83.96                      | 12.31                  | 423,653.70         | 614,949.19        |  |
| 2,577.00     | 8.80       | 338.30               | 2,571.72      | -104.17          | 104.16        | 10.36         | 104.67                     | 5.68                   | 423,675.83         | 614,941.65        |  |
| 2,666.00     | 9.00       | 337.50               | 2,659.65      | -116.92          | 116.91        | 5.18          | 117.03                     | 2.54                   | 423,688.58         | 614,936.47        |  |
| 2,755.00     | 9.00       | 337.00               | 2,747.55      | -129.75          | 129.75        | -0.20         | 129.75                     | 359.91                 | 423,701.42         | 614,931.09        |  |
| 2,845.00     | 9.10       | 347.20               | 2,836.44      | -143.17          | 143.17        | -4.53         | 143.25                     | 358.19                 | 423,714.84         | 614,926.76        |  |
| 2,934.00     | 11.10      | 4.60                 | 2,924.07      | -158.58          | 158.58        | -5.40         | 158.67                     | 358.05                 | 423,730.25         | 614,925.89        |  |
| 3,024.00     | 11.20      | 3.90                 | 3,012.38      | -175.93          | 175.94        | -4.11         | 175.99                     | 358.66                 | 423,747.61         | 614,927.18        |  |
| 3,113.00     | 11.50      | 2.50                 | 3,099.63      | -193.42          | 193.42        | -3.14         | 193.45                     | 359.07                 | 423,765.09         | 614,928.15        |  |
| 3,203.00     | 11.50      | 0.70                 | 3,187.83      | -211.36          | 211.36        | -2.64         | 211.37                     | 359.29                 | 423,783.03         | 614,928.65        |  |
| 3,292.00     | 11.30      | 0.30                 | 3,275.07      | -228.95          | 228.95        | -2.48         | 228.96                     | 359.38                 | 423,800.62         | 614,928.81        |  |
| 3,381.00     | 10.60      | 0.30                 | 3,362.45      | -245.85          | 245.85        | -2.39         | 245.87                     | 359.44                 | 423,817.52         | 614,928.90        |  |
| 3,470.00     | 10.20      | 358.40               | 3,449.99      | -261.91          | 261.92        | -2.57         | 261.93                     | 359.44                 | 423,833.59         | 614,928.72        |  |
| 3,559.00     | 10.20      | 356.90               | 3,537.58      | -277.66          | 277.66        | -3.22         | 277.68                     | 359.34                 | 423,849.33         | 614,928.07        |  |
| 3,649.00     | 9.90       | 356.40               | 3,626.20      | -293.34          | 293.34        | -4.13         | 293.37                     | 359.19                 | 423,865.01         | 614,927.16        |  |
| 3,738.00     | 9.90       | 355.00               | 3,713.88      | -308.59          | 308.60        | -5.28         | 308.65                     | 359.02                 | 423,880.27         | 614,926.01        |  |
| 3,827.00     | 9.90       | 355.30               | 3,801.55      | -323.84          | 323.85        | -6.57         | 323.91                     | 358.84                 | 423,895.52         | 614,924.72        |  |
| 3,916.00     | 9.70       | 352.80               | 3,889.25      | -338.90          | 338.91        | -8.14         | 339.01                     | 358.62                 | 423,910.58         | 614,923.15        |  |
| 4,006.00     | 9.30       | 352.30               | 3,978.02      | -353.63          | 353.64        | -10.07        | 353.78                     | 358.37                 | 423,925.31         | 614,921.22        |  |
| 4,095.00     | 8.90       | 350.00               | 4,065.90      | -367.53          | 367.55        | -12.22        | 367.75                     | 358.09                 | 423,939.22         | 614,919.07        |  |

**Company:** Marathon Oil  
**Project:** Eddy County, NM(NAD 83)  
**Site:** Rick Deckard State 25-28-4 WXY  
**Well:** No. 8H  
**Wellbore:** OH  
**Design:** MWD-90'-14197', PTB: 14267'

**Local Co-ordinate Reference:**  
**TVD Reference:**  
**MD Reference:**  
**North Reference:**  
**Survey Calculation Method:**  
**Database:**

**Well No. 8H**  
 Well @ 3027.00usft  
 Well @ 3027.00usft  
 Grid  
 Minimum Curvature  
 WellPlanner1

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 4,185.00     | 8.70       | 348.80               | 4,154.84      | -381.06          | 381.08        | -14.76        | 381.37                     | 357.78                 | 423,952.75         | 614,916.53        |  |
| 4,274.00     | 8.80       | 349.60               | 4,242.80      | -394.36          | 394.38        | -17.29        | 394.76                     | 357.49                 | 423,966.05         | 614,914.00        |  |
| 4,364.00     | 9.10       | 348.50               | 4,331.71      | -408.10          | 408.12        | -19.95        | 408.61                     | 357.20                 | 423,979.79         | 614,911.34        |  |
| 4,453.00     | 9.20       | 348.10               | 4,419.57      | -421.96          | 421.98        | -22.82        | 422.60                     | 356.90                 | 423,993.65         | 614,908.47        |  |
| 4,543.00     | 9.10       | 347.00               | 4,508.43      | -435.93          | 435.96        | -25.91        | 436.73                     | 356.60                 | 424,007.63         | 614,905.38        |  |
| 4,632.00     | 8.40       | 347.70               | 4,596.39      | -449.14          | 449.17        | -28.88        | 450.09                     | 356.32                 | 424,020.84         | 614,902.41        |  |
| 4,722.00     | 8.00       | 344.70               | 4,685.47      | -461.60          | 461.63        | -31.93        | 462.73                     | 356.04                 | 424,033.30         | 614,899.36        |  |
| 4,811.00     | 7.40       | 341.30               | 4,773.67      | -473.00          | 473.03        | -35.40        | 474.36                     | 355.72                 | 424,044.70         | 614,895.89        |  |
| 4,900.00     | 7.60       | 353.70               | 4,861.92      | -484.27          | 484.31        | -37.89        | 485.79                     | 355.53                 | 424,055.98         | 614,893.40        |  |
| 4,989.00     | 7.40       | 354.50               | 4,950.15      | -495.83          | 495.87        | -39.08        | 497.41                     | 355.49                 | 424,067.54         | 614,892.21        |  |
| 5,079.00     | 7.10       | 355.70               | 5,039.43      | -507.14          | 507.18        | -40.05        | 508.76                     | 355.48                 | 424,078.85         | 614,891.24        |  |
| 5,168.00     | 6.70       | 353.70               | 5,127.79      | -517.79          | 517.83        | -41.04        | 519.45                     | 355.47                 | 424,089.50         | 614,890.25        |  |
| 5,258.00     | 6.60       | 354.70               | 5,217.18      | -528.15          | 528.20        | -42.09        | 529.87                     | 355.44                 | 424,099.87         | 614,889.20        |  |
| 5,347.00     | 5.10       | 2.90                 | 5,305.72      | -537.20          | 537.24        | -42.36        | 538.91                     | 355.49                 | 424,108.91         | 614,888.93        |  |
| 5,437.00     | 4.50       | 6.00                 | 5,395.40      | -544.70          | 544.75        | -41.79        | 546.35                     | 355.61                 | 424,116.42         | 614,889.50        |  |
| 5,526.00     | 3.90       | 355.00               | 5,484.17      | -551.19          | 551.24        | -41.69        | 552.81                     | 355.68                 | 424,122.91         | 614,889.60        |  |
| 5,616.00     | 3.30       | 352.30               | 5,573.99      | -556.81          | 556.85        | -42.30        | 558.46                     | 355.66                 | 424,128.52         | 614,888.99        |  |
| 5,706.00     | 3.30       | 345.30               | 5,663.84      | -561.88          | 561.92        | -43.31        | 563.59                     | 355.59                 | 424,133.59         | 614,887.98        |  |
| 5,795.00     | 3.30       | 12.80                | 5,752.70      | -566.85          | 566.90        | -43.39        | 568.56                     | 355.62                 | 424,138.57         | 614,887.90        |  |
| 5,884.00     | 3.00       | 18.80                | 5,841.56      | -571.56          | 571.60        | -42.07        | 573.15                     | 355.79                 | 424,143.27         | 614,889.22        |  |
| 5,974.00     | 3.00       | 14.00                | 5,931.44      | -576.07          | 576.12        | -40.74        | 577.56                     | 355.95                 | 424,147.79         | 614,890.55        |  |
| 6,064.00     | 3.00       | 8.80                 | 6,021.32      | -580.69          | 580.73        | -39.81        | 582.09                     | 356.08                 | 424,152.40         | 614,891.48        |  |
| 6,153.00     | 2.50       | 4.00                 | 6,110.21      | -584.93          | 584.97        | -39.32        | 586.29                     | 356.15                 | 424,156.64         | 614,891.97        |  |
| 6,243.00     | 2.40       | 2.40                 | 6,200.13      | -588.77          | 588.81        | -39.11        | 590.11                     | 356.20                 | 424,160.48         | 614,892.18        |  |
| 6,332.00     | 3.30       | 337.90               | 6,289.02      | -593.00          | 593.04        | -39.99        | 594.39                     | 356.14                 | 424,164.71         | 614,891.30        |  |
| 6,422.00     | 3.90       | 332.50               | 6,378.85      | -598.11          | 598.16        | -42.38        | 599.66                     | 355.95                 | 424,169.83         | 614,888.91        |  |
| 6,511.00     | 4.40       | 319.20               | 6,467.61      | -603.38          | 603.43        | -46.01        | 605.18                     | 355.64                 | 424,175.10         | 614,885.28        |  |

|                  |                                |                                     |                    |
|------------------|--------------------------------|-------------------------------------|--------------------|
| <b>Company:</b>  | Marathon Oil                   | <b>Local Co-ordinate Reference:</b> | Well No. 8H        |
| <b>Project:</b>  | Eddy County, NM(NAD 83)        | <b>TVD Reference:</b>               | Well @ 3027.00usft |
| <b>Site:</b>     | Rick Deckard State 25-28-4 WXY | <b>MD Reference:</b>                | Well @ 3027.00usft |
| <b>Well:</b>     | No. 8H                         | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                             | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | MWD-90'-14197', PTB: 14267'    | <b>Database:</b>                    | WellPlanner1       |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 6,600.00     | 4.50       | 329.30               | 6,556.35      | -608.96          | 609.01        | -50.02        | 611.07                     | 355.30                 | 424,180.68         | 614,881.27        |  |
| 6,690.00     | 4.60       | 338.30               | 6,646.06      | -615.35          | 615.40        | -53.16        | 617.70                     | 355.06                 | 424,187.07         | 614,878.13        |  |
| 6,779.00     | 5.10       | 332.50               | 6,734.75      | -622.17          | 622.23        | -56.30        | 624.77                     | 354.83                 | 424,193.90         | 614,874.99        |  |
| 6,868.00     | 4.80       | 347.40               | 6,823.42      | -629.31          | 629.37        | -58.94        | 632.13                     | 354.65                 | 424,201.04         | 614,872.35        |  |
| 6,957.00     | 4.10       | 356.40               | 6,912.15      | -636.12          | 636.18        | -59.95        | 639.00                     | 354.62                 | 424,207.85         | 614,871.34        |  |
| 7,047.00     | 3.60       | 351.40               | 7,001.95      | -642.12          | 642.19        | -60.58        | 645.04                     | 354.61                 | 424,213.86         | 614,870.71        |  |
| 7,136.00     | 2.50       | 14.90                | 7,090.82      | -646.76          | 646.83        | -60.50        | 649.65                     | 354.66                 | 424,218.50         | 614,870.79        |  |
| 7,225.00     | 2.30       | 17.90                | 7,179.75      | -650.34          | 650.40        | -59.45        | 653.11                     | 354.78                 | 424,222.07         | 614,871.84        |  |
| 7,314.00     | 1.70       | 1.70                 | 7,268.69      | -653.36          | 653.42        | -58.86        | 656.07                     | 354.85                 | 424,225.09         | 614,872.43        |  |
| 7,404.00     | 1.60       | 325.60               | 7,358.66      | -655.73          | 655.79        | -59.53        | 658.49                     | 354.81                 | 424,227.46         | 614,871.76        |  |
| 7,493.00     | 0.80       | 330.20               | 7,447.64      | -657.29          | 657.36        | -60.54        | 660.14                     | 354.74                 | 424,229.03         | 614,870.75        |  |
| 7,582.00     | 2.30       | 10.60                | 7,536.60      | -659.59          | 659.65        | -60.52        | 662.42                     | 354.76                 | 424,231.32         | 614,870.77        |  |
| 7,671.00     | 2.50       | 14.80                | 7,625.52      | -663.22          | 663.28        | -59.70        | 665.96                     | 354.86                 | 424,234.95         | 614,871.59        |  |
| 7,761.00     | 3.70       | 359.30               | 7,715.39      | -668.02          | 668.08        | -59.23        | 670.70                     | 354.93                 | 424,239.75         | 614,872.06        |  |
| 7,850.00     | 3.10       | 352.30               | 7,804.24      | -673.28          | 673.34        | -59.59        | 675.97                     | 354.94                 | 424,245.01         | 614,871.70        |  |
| 7,939.00     | 2.30       | 347.50               | 7,893.14      | -677.40          | 677.47        | -60.30        | 680.15                     | 354.91                 | 424,249.14         | 614,870.99        |  |
| 8,028.00     | 2.90       | 1.00                 | 7,982.05      | -681.40          | 681.46        | -60.65        | 684.16                     | 354.91                 | 424,253.13         | 614,870.64        |  |
| 8,118.00     | 3.20       | 3.10                 | 8,071.92      | -686.18          | 686.25        | -60.47        | 688.91                     | 354.96                 | 424,257.92         | 614,870.82        |  |
| 8,207.00     | 2.90       | 3.70                 | 8,160.79      | -690.91          | 690.97        | -60.19        | 693.59                     | 355.02                 | 424,262.64         | 614,871.10        |  |
| 8,296.00     | 2.40       | 11.50                | 8,249.70      | -694.98          | 695.05        | -59.67        | 697.60                     | 355.09                 | 424,266.72         | 614,871.62        |  |
| 8,385.00     | 1.70       | 355.90               | 8,338.64      | -698.13          | 698.19        | -59.40        | 700.71                     | 355.14                 | 424,269.86         | 614,871.89        |  |
| 8,475.00     | 1.00       | 318.00               | 8,428.62      | -700.04          | 700.11        | -60.02        | 702.67                     | 355.10                 | 424,271.78         | 614,871.27        |  |
| 8,564.00     | 1.80       | 332.00               | 8,517.59      | -701.85          | 701.92        | -61.19        | 704.58                     | 355.02                 | 424,273.59         | 614,870.10        |  |
| 8,654.00     | 1.10       | 343.20               | 8,607.56      | -703.93          | 703.99        | -62.11        | 706.73                     | 354.96                 | 424,275.66         | 614,869.18        |  |
| 8,743.00     | 1.00       | 357.90               | 8,696.55      | -705.52          | 705.59        | -62.38        | 708.34                     | 354.95                 | 424,277.26         | 614,868.91        |  |
| 8,832.00     | 0.80       | 327.40               | 8,785.53      | -706.82          | 706.89        | -62.75        | 709.67                     | 354.93                 | 424,278.56         | 614,868.54        |  |
| 8,916.00     | 1.00       | 299.60               | 8,869.52      | -707.67          | 707.74        | -63.70        | 710.60                     | 354.86                 | 424,279.41         | 614,867.59        |  |

**Company:** Marathon Oil  
**Project:** Eddy County, NM(NAD 83)  
**Site:** Rick Deckard State 25-28-4 WXY  
**Well:** No. 8H  
**Wellbore:** OH  
**Design:** MWD-90'-14197", PTB: 14267"

**Local Co-ordinate Reference:**  
**TVD Reference:** Well No. 8H  
**MD Reference:** Well @ 3027.00usft  
**North Reference:** Well @ 3027.00usft  
**Survey Calculation Method:** Grid  
**Database:** Minimum Curvature  
 WellPlanner1

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |
| 9,005.00     | 2.50       | 211.00               | 8,958.49      | -706.39          | 706.46        | -65.38        | 709.48                     | 354.71                 | 424,278.13         | 614,865.91        |
| 9,094.00     | 10.70      | 194.10               | 9,046.83      | -696.70          | 696.77        | -68.39        | 700.12                     | 354.39                 | 424,268.44         | 614,862.90        |
| 9,184.00     | 11.50      | 179.30               | 9,135.17      | -679.62          | 679.69        | -70.32        | 683.32                     | 354.09                 | 424,251.36         | 614,860.97        |
| 9,273.00     | 18.20      | 172.50               | 9,221.15      | -656.94          | 657.01        | -68.39        | 660.56                     | 354.06                 | 424,228.68         | 614,862.90        |
| 9,362.00     | 31.70      | 176.70               | 9,301.66      | -619.64          | 619.71        | -65.22        | 623.13                     | 353.99                 | 424,191.38         | 614,866.07        |
| 9,451.00     | 48.40      | 184.20               | 9,369.59      | -562.67          | 562.74        | -66.32        | 566.64                     | 353.28                 | 424,134.41         | 614,864.97        |
| 9,540.00     | 61.10      | 182.20               | 9,420.85      | -490.25          | 490.32        | -70.27        | 495.33                     | 351.84                 | 424,061.99         | 614,861.02        |
| 9,629.00     | 77.50      | 179.90               | 9,452.21      | -407.30          | 407.37        | -71.70        | 413.63                     | 350.02                 | 423,979.04         | 614,859.59        |
| 9,730.00     | 89.80      | 178.00               | 9,463.36      | -307.13          | 307.21        | -69.84        | 315.04                     | 347.19                 | 423,878.88         | 614,861.45        |
| 9,820.00     | 90.40      | 177.90               | 9,463.20      | -217.19          | 217.26        | -66.62        | 227.25                     | 342.95                 | 423,788.93         | 614,864.67        |
| 9,909.00     | 90.10      | 177.40               | 9,462.81      | -128.27          | 128.34        | -62.97        | 142.96                     | 333.86                 | 423,700.01         | 614,868.32        |
| 9,999.00     | 90.50      | 177.70               | 9,462.34      | -38.36           | 38.42         | -59.13        | 70.51                      | 303.02                 | 423,610.09         | 614,872.16        |
| 10,088.00    | 91.20      | 177.90               | 9,461.02      | 50.56            | -50.50        | -55.71        | 75.19                      | 227.81                 | 423,521.17         | 614,875.58        |
| 10,178.00    | 91.70      | 177.90               | 9,458.75      | 140.47           | -140.41       | -52.41        | 149.87                     | 200.47                 | 423,431.26         | 614,878.88        |
| 10,268.00    | 90.80      | 179.70               | 9,456.78      | 230.42           | -230.37       | -50.53        | 235.84                     | 192.37                 | 423,341.30         | 614,880.76        |
| 10,357.00    | 90.60      | 180.30               | 9,455.69      | 319.41           | -319.36       | -50.53        | 323.33                     | 188.99                 | 423,252.31         | 614,880.76        |
| 10,447.00    | 91.30      | 180.30               | 9,454.20      | 409.40           | -409.34       | -51.00        | 412.51                     | 187.10                 | 423,162.33         | 614,880.29        |
| 10,536.00    | 91.40      | 180.40               | 9,452.11      | 498.37           | -498.32       | -51.54        | 500.98                     | 185.91                 | 423,073.35         | 614,879.75        |
| 10,626.00    | 89.90      | 180.30               | 9,451.08      | 588.36           | -588.31       | -52.09        | 590.61                     | 185.06                 | 422,983.36         | 614,879.20        |
| 10,716.00    | 89.60      | 179.50               | 9,451.48      | 678.36           | -678.31       | -51.94        | 680.29                     | 184.38                 | 422,893.36         | 614,879.35        |
| 10,805.00    | 90.00      | 179.90               | 9,451.79      | 767.36           | -767.30       | -51.47        | 769.03                     | 183.84                 | 422,804.37         | 614,879.82        |
| 10,894.00    | 90.60      | 180.00               | 9,451.32      | 856.36           | -856.30       | -51.39        | 857.84                     | 183.43                 | 422,715.37         | 614,879.90        |
| 10,984.00    | 91.70      | 180.50               | 9,449.52      | 946.33           | -946.28       | -51.78        | 947.70                     | 183.13                 | 422,625.39         | 614,879.51        |
| 11,073.00    | 91.20      | 181.20               | 9,447.26      | 1,035.30         | -1,035.24     | -53.10        | 1,036.60                   | 182.94                 | 422,536.43         | 614,878.19        |
| 11,162.00    | 88.70      | 181.10               | 9,447.34      | 1,124.27         | -1,124.22     | -54.89        | 1,125.56                   | 182.80                 | 422,447.45         | 614,876.40        |
| 11,251.00    | 88.80      | 181.20               | 9,449.28      | 1,213.24         | -1,213.18     | -56.68        | 1,214.50                   | 182.67                 | 422,358.49         | 614,874.61        |
| 11,341.00    | 89.50      | 181.60               | 9,450.62      | 1,303.20         | -1,303.14     | -58.88        | 1,304.47                   | 182.59                 | 422,268.53         | 614,872.41        |

|                  |                                |                                     |                    |
|------------------|--------------------------------|-------------------------------------|--------------------|
| <b>Company:</b>  | Marathon Oil                   | <b>Local Co-ordinate Reference:</b> | Well No. 8H        |
| <b>Project:</b>  | Eddy County, NM(NAD 83)        | <b>TVD Reference:</b>               | Well @ 3027.00usft |
| <b>Site:</b>     | Rick Deckard State 25-28-4 WXY | <b>MD Reference:</b>                | Well @ 3027.00usft |
| <b>Well:</b>     | No. 8H                         | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                             | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | MWD-90'-14197', PTB: 14267'    | <b>Database:</b>                    | WellPlanner1       |

| Survey       |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
|--------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|--|
| MD<br>(usft) | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |  |
| 11,430.00    | 89.60      | 181.90               | 9,451.32      | 1,392.16         | -1,392.10     | -61.59        | 1,393.46                   | 182.53                 | 422,179.57         | 614,869.70        |  |
| 11,519.00    | 89.30      | 182.10               | 9,452.17      | 1,481.10         | -1,481.04     | -64.70        | 1,482.45                   | 182.50                 | 422,090.63         | 614,866.59        |  |
| 11,609.00    | 89.10      | 181.60               | 9,453.43      | 1,571.05         | -1,570.98     | -67.60        | 1,572.44                   | 182.46                 | 422,000.69         | 614,863.69        |  |
| 11,698.00    | 89.40      | 181.70               | 9,454.59      | 1,660.01         | -1,659.94     | -70.17        | 1,661.42                   | 182.42                 | 421,911.73         | 614,861.12        |  |
| 11,787.00    | 89.80      | 181.70               | 9,455.21      | 1,748.97         | -1,748.90     | -72.81        | 1,750.41                   | 182.38                 | 421,822.77         | 614,858.48        |  |
| 11,876.00    | 90.10      | 180.70               | 9,455.29      | 1,837.95         | -1,837.87     | -74.67        | 1,839.39                   | 182.33                 | 421,733.80         | 614,856.62        |  |
| 11,966.00    | 89.60      | 179.90               | 9,455.53      | 1,927.95         | -1,927.87     | -75.14        | 1,929.34                   | 182.23                 | 421,643.80         | 614,856.15        |  |
| 12,055.00    | 89.70      | 179.90               | 9,456.07      | 2,016.95         | -2,016.87     | -74.99        | 2,018.26                   | 182.13                 | 421,554.80         | 614,856.30        |  |
| 12,144.00    | 90.30      | 180.10               | 9,456.07      | 2,105.95         | -2,105.87     | -74.99        | 2,107.20                   | 182.04                 | 421,465.80         | 614,856.30        |  |
| 12,233.00    | 90.40      | 178.90               | 9,455.53      | 2,194.94         | -2,194.86     | -74.21        | 2,196.12                   | 181.94                 | 421,376.81         | 614,857.08        |  |
| 12,323.00    | 90.70      | 178.40               | 9,454.66      | 2,284.91         | -2,284.83     | -72.09        | 2,285.97                   | 181.81                 | 421,286.84         | 614,859.20        |  |
| 12,412.00    | 91.00      | 178.70               | 9,453.34      | 2,373.87         | -2,373.79     | -69.84        | 2,374.82                   | 181.69                 | 421,197.88         | 614,861.45        |  |
| 12,501.00    | 90.20      | 178.60               | 9,452.41      | 2,462.83         | -2,462.76     | -67.74        | 2,463.70                   | 181.58                 | 421,108.91         | 614,863.55        |  |
| 12,590.00    | 90.60      | 178.70               | 9,451.79      | 2,551.80         | -2,551.74     | -65.64        | 2,552.58                   | 181.47                 | 421,019.93         | 614,865.65        |  |
| 12,679.00    | 89.20      | 179.20               | 9,451.95      | 2,640.79         | -2,640.72     | -64.01        | 2,641.50                   | 181.39                 | 420,930.95         | 614,867.28        |  |
| 12,769.00    | 88.50      | 179.00               | 9,453.75      | 2,730.75         | -2,730.69     | -62.60        | 2,731.41                   | 181.31                 | 420,840.98         | 614,868.69        |  |
| 12,858.00    | 89.20      | 179.40               | 9,455.54      | 2,819.73         | -2,819.66     | -61.36        | 2,820.33                   | 181.25                 | 420,752.01         | 614,869.93        |  |
| 12,948.00    | 89.80      | 179.60               | 9,456.32      | 2,909.72         | -2,909.66     | -60.57        | 2,910.29                   | 181.19                 | 420,662.01         | 614,870.72        |  |
| 13,037.00    | 90.40      | 180.80               | 9,456.17      | 2,998.71         | -2,998.65     | -60.88        | 2,999.27                   | 181.16                 | 420,573.02         | 614,870.41        |  |
| 13,126.00    | 91.60      | 181.30               | 9,454.61      | 3,087.69         | -3,087.62     | -62.51        | 3,088.26                   | 181.16                 | 420,484.05         | 614,868.78        |  |
| 13,215.00    | 90.70      | 180.80               | 9,452.83      | 3,176.65         | -3,176.59     | -64.14        | 3,177.24                   | 181.16                 | 420,395.08         | 614,867.15        |  |
| 13,304.00    | 89.40      | 180.40               | 9,452.75      | 3,265.65         | -3,265.58     | -65.08        | 3,266.23                   | 181.14                 | 420,306.09         | 614,866.21        |  |
| 13,394.00    | 90.10      | 180.80               | 9,453.14      | 3,355.64         | -3,355.57     | -66.02        | 3,356.22                   | 181.13                 | 420,216.10         | 614,865.27        |  |
| 13,483.00    | 90.50      | 180.80               | 9,452.68      | 3,444.63         | -3,444.56     | -67.26        | 3,445.22                   | 181.12                 | 420,127.11         | 614,864.03        |  |
| 13,572.00    | 89.80      | 180.90               | 9,452.44      | 3,533.62         | -3,533.55     | -68.58        | 3,534.22                   | 181.11                 | 420,038.12         | 614,862.71        |  |
| 13,661.00    | 89.40      | 180.60               | 9,453.07      | 3,622.62         | -3,622.54     | -69.75        | 3,623.22                   | 181.10                 | 419,949.13         | 614,861.54        |  |
| 13,750.00    | 89.90      | 180.80               | 9,453.61      | 3,711.61         | -3,711.54     | -70.83        | 3,712.21                   | 181.09                 | 419,860.13         | 614,860.46        |  |

|                  |                                |                                     |                    |
|------------------|--------------------------------|-------------------------------------|--------------------|
| <b>Company:</b>  | Marathon Oil                   | <b>Local Co-ordinate Reference:</b> | Well No. 8H        |
| <b>Project:</b>  | Eddy County, NM(NAD 83)        | <b>TVD Reference:</b>               | Well @ 3027.00usft |
| <b>Site:</b>     | Rick Deckard State 25-28-4 WXY | <b>MD Reference:</b>                | Well @ 3027.00usft |
| <b>Well:</b>     | No. 8H                         | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                             | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | MWD-90'-14197', PTB: 14267'    | <b>Database:</b>                    | WellPlanner1       |

| Survey                 |            |                      |               |                  |               |               |                            |                        |                    |                   |
|------------------------|------------|----------------------|---------------|------------------|---------------|---------------|----------------------------|------------------------|--------------------|-------------------|
| MD<br>(usft)           | Inc<br>(°) | Azi (azimuth)<br>(°) | TVD<br>(usft) | V. Sec<br>(usft) | N/S<br>(usft) | E/W<br>(usft) | Closure Distance<br>(usft) | Closure Azimuth<br>(°) | Northing<br>(usft) | Easting<br>(usft) |
| 13,840.00              | 89.80      | 180.50               | 9,453.85      | 3,801.60         | -3,801.53     | -71.85        | 3,802.21                   | 181.08                 | 419,770.14         | 614,859.44        |
| 13,929.00              | 87.90      | 178.60               | 9,455.63      | 3,890.57         | -3,890.50     | -71.16        | 3,891.15                   | 181.05                 | 419,681.17         | 614,860.13        |
| 14,018.00              | 88.00      | 178.30               | 9,458.82      | 3,979.48         | -3,979.41     | -68.75        | 3,980.00                   | 180.99                 | 419,592.26         | 614,862.54        |
| 14,107.00              | 88.30      | 178.60               | 9,461.69      | 4,068.40         | -4,068.33     | -66.34        | 4,068.87                   | 180.93                 | 419,503.34         | 614,864.95        |
| 14,197.00              | 88.40      | 178.60               | 9,464.28      | 4,158.33         | -4,158.27     | -64.15        | 4,158.76                   | 180.88                 | 419,413.40         | 614,867.14        |
| Last Survey: 14197' MD |            |                      |               |                  |               |               |                            |                        |                    |                   |
| 14,267.00              | 88.40      | 178.60               | 9,466.23      | 4,228.28         | -4,228.22     | -62.44        | 4,228.68                   | 180.85                 | 419,343.45         | 614,868.85        |
| PTB: 14267' MD         |            |                      |               |                  |               |               |                            |                        |                    |                   |

| Design Annotations          |                             |                   |                 |                               |
|-----------------------------|-----------------------------|-------------------|-----------------|-------------------------------|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 | Comment                       |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) |                               |
| 510.00                      | 509.97                      | 2.32              | -4.74           | Pro MWD First Survey: 510' MD |
| 14,197.00                   | 9,464.28                    | -4,158.27         | -64.15          | Last Survey: 14197' MD        |
| 14,267.00                   | 9,466.23                    | -4,228.22         | -62.44          | PTB: 14267' MD                |