

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

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JAN 15 2020

EMNRD-OCD ARTESIA

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><b>30-015-45605</b> | <sup>2</sup> Pool Code<br><b>98220</b>                        | <sup>3</sup> Pool Name<br><b>PURPLE SAGE (WOLFCAMP)</b> |
| <sup>4</sup> Property Code<br><b>326257</b>    | Property Name<br><b>SWEET TEA 31 WA FEDERAL</b>               |                                                         |
| <sup>7</sup> OGRID No.<br><b>372098</b>        | <sup>8</sup> Operator Name<br><b>MARATHON OIL PERMIAN LLC</b> |                                                         |
|                                                |                                                               | <sup>6</sup> Well Number<br><b>8H</b>                   |
|                                                |                                                               | <sup>9</sup> Elevation<br><b>2906'</b>                  |

<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      |
|---------------|-----------|-------------|-------------|---------|---------------|------------------|---------------|----------------|-------------|
| <b>K</b>      | <b>31</b> | <b>T24S</b> | <b>R29E</b> |         | <b>2400</b>   | <b>SOUTH</b>     | <b>2183</b>   | <b>WEST</b>    | <b>EDDY</b> |

<sup>11</sup> Bottom Hole Location If Different From Surface

| UL or lot no. | Section  | Township    | Range       | Lot Idn | Feet from the | North/South line | Feet from the | East/West line | County      |
|---------------|----------|-------------|-------------|---------|---------------|------------------|---------------|----------------|-------------|
| <b>N</b>      | <b>6</b> | <b>T25S</b> | <b>R29E</b> |         | <b>332</b>    | <b>SOUTH</b>     | <b>2278</b>   | <b>WEST</b>    | <b>EDDY</b> |

|                                                |                               |                                  |                         |
|------------------------------------------------|-------------------------------|----------------------------------|-------------------------|
| <sup>12</sup> Dedicated Acres<br><b>475.67</b> | <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>SURFACE HOLE LOCATION</b><br/>2400' FSL 2183' FWL, SECTION 31<br/>NAD 83, SPCS NM EAST<br/>X:636678.70' / Y:426836.58'<br/>LAT:32.17307640N / LON:104.02518960W<br/>NAD 27, SPCS NM EAST<br/>X:595494.56' / Y:426778.09'<br/>LAT:32.17295346N / LON:104.02470101W</p>                                                          | <p><b><sup>17</sup> OPERATOR CERTIFICATION</b><br/>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><i>[Signature]</i> <b>1/14/2020</b><br/>Signature Date<br/><b>Adrian Covarrubias</b><br/>Printed Name<br/>E-mail Address</p> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | <p><b>KICK OFF POINT</b><br/>9,390' MEASURED DEPTH IN FEET<br/>NAD 83, SPCS NM EAST<br/>X:636816.69' / Y:427007.57'<br/>LAT:32.17354534N / LON:104.02474207W<br/>NAD 27, SPCS NM EAST<br/>X:595632.55' / Y:426949.08'<br/>LAT:32.17342242N / LON:104.02425346W</p>                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <p><b>FIRST TAKE POINT (FARTHEST) MEASURED DEPTH=9,844'</b></p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | <p><b>SECTION 31 SECTION 32</b><br/><b>SECTION 6 SECTION 5</b><br/><b>FIRST TAKE POINT</b><br/>9,844' MEASURED DEPTH IN FEET<br/>NAD 83, SPCS NM EAST<br/>X:636812.16' / Y:426778.47'<br/>LAT:32.17291562N / LON:104.02475883W<br/>NAD 27, SPCS NM EAST<br/>X:595628.01' / Y:426719.99'<br/>LAT:32.17279268N / LON:104.02427024W</p> | <p><b><sup>18</sup> SURVEYOR CERTIFICATION</b><br/>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. <b>DECEMBER 18, 2019</b><br/>Date of Survey<br/>Signature and Seal of Professional Surveyor<br/><i>[Signature]</i><br/><b>LLOYD P. SHORT 21653</b><br/>Certificate Number<br/><b>LLOYD P. SHORT 21653</b></p>                                      |
| <p><b>LAST TAKE POINT/BOTTOM HOLE LOCATION</b><br/>17,174' MEASURED DEPTH IN FEET<br/>NAD 83, SPCS NM EAST<br/>X:636784.40' / Y:419476.85'<br/>LAT:32.15284445N / LON:104.02491618W<br/>NAD 27, SPCS NM EAST<br/>X:595600.08' / Y:419418.51'<br/>LAT:32.15272127N / LON:104.02442824W</p> <p><b>CORNER COORDINATES</b><br/>NAD 83, SPCS NM EAST<br/>A - X: 634494.93' / Y: 427097.80'<br/>B - X: 637143.80' / Y: 427110.00'<br/>C - X: 637140.02' / Y: 419151.27'<br/>D - X: 634506.81' / Y: 419106.02'</p> <p><b>CORNER COORDINATES</b><br/>NAD 27, SPCS NM EAST<br/>A - X: 593310.84' / Y: 427039.34'<br/>B - X: 595959.65' / Y: 427051.51'<br/>C - X: 595955.69' / Y: 419092.94'<br/>D - X: 593322.53' / Y: 419047.72'</p> |  |                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

DISTANCES/AREAS RELATIVE TO NAD83 COMBINED SCALE FACTOR: 0.999919302  
CONVERGENCE: 0.1040810694; NOTE: ALL DIMENSIONS IN U.S. FEET

|      |          |     |
|------|----------|-----|
| 1    | 12/18/19 | DEF |
| REV. | DATE     | BY  |

SHEET 1 OF 1  
JOB No. R3815\_008



PRODIRECTIONAL

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# Marathon Oil Corporation

Sweet Tea Fed 24-29-31 WA No. 8H  
Eddy County, NM

June 16, 2019

Job# LNM1445319  
API# 30-015-45605

## Survey Completion Report



PRODIRECTIONAL

## Survey Certification Letter

June 16, 2019



**Marathon Oil**  
Corporation

Operator Name: Marathon Oil  
Well Name: Sweet Tea Fed 24-29-31 WA No. 8H  
County/Parish: Eddy County,  
State: NM  
Rig Name: Precision 498  
Job Number: LNM1445319

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 | 457' MD – 17,117' MD | 17,174' MD        | 04/30/19 – 05/16/19 | 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(NAD 83)

Sweet Tea Federal 24-29-31 WA

No. 8H

OH

Design: Gyro-MWD

## Survey Report

17 June, 2019



**PRO**DIRECTIONAL

|                  |                               |                                     |                    |
|------------------|-------------------------------|-------------------------------------|--------------------|
| <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 @ 2932.50usft |
| <b>Site:</b>     | Sweet Tea Federal 24-29-31 WA | <b>MD Reference:</b>                | Well @ 2932.50usft |
| <b>Well:</b>     | No. 8H                        | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | Gyro-MWD                      | <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>                  | Sweet Tea Federal 24-29-31 WA |                          |                 |
| <b>Site Position:</b>        |                               | <b>Northing:</b>         | 426,836.54 usft |
| <b>From:</b>                 | Map                           | <b>Easting:</b>          | 636,648.75 usft |
| <b>Position Uncertainty:</b> | 0.00 usft                     | <b>Slot Radius:</b>      | 13-3/16 "       |
|                              |                               | <b>Latitude:</b>         | 32.173077       |
|                              |                               | <b>Longitude:</b>        | -104.025286     |
|                              |                               | <b>Grid Convergence:</b> | 0.16 °          |

|                             |              |                            |                                  |
|-----------------------------|--------------|----------------------------|----------------------------------|
| <b>Well</b>                 | No. 8H       |                            |                                  |
| <b>Well Position</b>        | <b>+N/-S</b> | 0.00 usft                  | <b>Northing:</b> 426,836.58 usft |
|                             | <b>+E/-W</b> | 0.00 usft                  | <b>Easting:</b> 636,678.70 usft  |
| <b>Position Uncertainty</b> | 0.00 usft    | <b>Wellhead Elevation:</b> | usft                             |
|                             |              | <b>Latitude:</b>           | 32.173076                        |
|                             |              | <b>Longitude:</b>          | -104.025190                      |
|                             |              | <b>Ground Level:</b>       | 2,906.00 usft                    |

|                  |                   |                    |                                 |
|------------------|-------------------|--------------------|---------------------------------|
| <b>Wellbore</b>  | OH                |                    |                                 |
| <b>Magnetics</b> | <b>Model Name</b> | <b>Sample Date</b> | <b>Declination</b>              |
|                  | HDGM              | 4/10/2019          | (°) 7.02                        |
|                  |                   |                    | <b>Dip Angle</b> 59.90          |
|                  |                   |                    | (°)                             |
|                  |                   |                    | <b>Field Strength</b> 47,903.30 |
|                  |                   |                    | (nT)                            |

|                          |                         |                      |              |
|--------------------------|-------------------------|----------------------|--------------|
| <b>Design</b>            | Gyro-MWD                |                      |              |
| <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> |
|                          | (usft)                  | (usft)               | (usft)       |
|                          | 0.00                    | 0.00                 | 0.00         |
|                          |                         | <b>Direction</b>     | (°)          |
|                          |                         |                      | 180.04       |

**Company:** Marathon Oil  
**Project:** Eddy County, NM(NAD 83)  
**Site:** Sweet Tea Federal 24-29-31 WA  
**Well:** No. 8H  
**Wellbore:** OH  
**Design:** Gyro-MWD

**Local Co-ordinate Reference:** Well No. 8H  
**TVD Reference:** Well @ 2932.50usft  
**MD Reference:** Well @ 2932.50usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** WellPlanner1

| Survey Program |           | Date 6/17/2019    |            |                 |
|----------------|-----------|-------------------|------------|-----------------|
| From (usft)    | To (usft) | Survey (Wellbore) | Tool Name  | Description     |
| 90.00          | 369.00    | Survey #1 (OH)    | MWD - OWSG | MWD - OWSG      |
| 457.00         | 17,174.00 | Survey #2 (OH)    | MWD+HDGM   | OWSG MWD + HRGM |

| Survey                        |         |                   |            |               |            |            |                         |                     |                 |                |  |
|-------------------------------|---------|-------------------|------------|---------------|------------|------------|-------------------------|---------------------|-----------------|----------------|--|
| 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                | 426,836.58      | 636,678.70     |  |
| 90.00                         | 1.00    | 198.27            | 90.00      | 0.75          | -0.75      | -0.25      | 0.79                    | 198.27              | 426,835.83      | 636,678.45     |  |
| 181.00                        | 0.50    | 68.27             | 180.99     | 1.35          | -1.35      | -0.13      | 1.36                    | 185.33              | 426,835.23      | 636,678.57     |  |
| 263.00                        | 0.50    | 10.27             | 262.99     | 0.87          | -0.87      | 0.27       | 0.91                    | 162.74              | 426,835.71      | 636,678.97     |  |
| 369.00                        | 0.60    | 74.27             | 368.98     | 0.26          | -0.26      | 0.89       | 0.92                    | 106.51              | 426,836.32      | 636,679.59     |  |
| 457.00                        | 0.50    | 109.20            | 456.98     | 0.26          | -0.26      | 1.69       | 1.71                    | 98.87               | 426,836.32      | 636,680.39     |  |
| Pro MWD First Survey: 457' MD |         |                   |            |               |            |            |                         |                     |                 |                |  |
| 517.00                        | 0.60    | 95.40             | 516.98     | 0.38          | -0.38      | 2.25       | 2.28                    | 99.57               | 426,836.20      | 636,680.95     |  |
| 609.00                        | 0.50    | 115.20            | 608.97     | 0.59          | -0.60      | 3.10       | 3.15                    | 100.90              | 426,835.98      | 636,681.80     |  |
| 701.00                        | 0.70    | 110.00            | 700.97     | 0.96          | -0.96      | 3.99       | 4.10                    | 103.53              | 426,835.62      | 636,682.69     |  |
| 793.00                        | 0.70    | 125.80            | 792.96     | 1.48          | -1.48      | 4.97       | 5.19                    | 106.58              | 426,835.10      | 636,683.67     |  |
| 885.00                        | 0.60    | 148.30            | 884.96     | 2.21          | -2.22      | 5.68       | 6.10                    | 111.34              | 426,834.36      | 636,684.38     |  |
| 977.00                        | 0.70    | 186.70            | 976.95     | 3.18          | -3.19      | 5.87       | 6.68                    | 118.51              | 426,833.39      | 636,684.57     |  |
| 1,069.00                      | 0.80    | 207.30            | 1,068.94   | 4.31          | -4.32      | 5.51       | 7.00                    | 128.08              | 426,832.26      | 636,684.21     |  |
| 1,163.00                      | 0.80    | 210.30            | 1,162.93   | 5.46          | -5.47      | 4.87       | 7.32                    | 138.27              | 426,831.11      | 636,683.57     |  |
| 1,258.00                      | 1.40    | 221.60            | 1,257.92   | 6.90          | -6.91      | 3.77       | 7.87                    | 151.37              | 426,829.67      | 636,682.47     |  |
| 1,353.00                      | 0.80    | 252.30            | 1,352.90   | 7.97          | -7.98      | 2.37       | 8.32                    | 163.47              | 426,828.60      | 636,681.07     |  |
| 1,447.00                      | 0.70    | 296.30            | 1,446.89   | 7.92          | -7.92      | 1.23       | 8.01                    | 171.19              | 426,828.66      | 636,679.93     |  |
| 1,542.00                      | 0.70    | 259.50            | 1,541.88   | 7.77          | -7.77      | 0.14       | 7.77                    | 178.99              | 426,828.81      | 636,678.84     |  |
| 1,636.00                      | 0.40    | 31.00             | 1,635.88   | 7.59          | -7.59      | -0.26      | 7.60                    | 181.95              | 426,828.99      | 636,678.44     |  |
| 1,731.00                      | 0.50    | 41.00             | 1,730.88   | 7.00          | -7.00      | 0.18       | 7.00                    | 178.49              | 426,829.58      | 636,678.88     |  |



|                  |                               |                                     |                    |
|------------------|-------------------------------|-------------------------------------|--------------------|
| <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 @ 2932.50usft |
| <b>Site:</b>     | Sweet Tea Federal 24-29-31 WA | <b>MD Reference:</b>                | Well @ 2932.50usft |
| <b>Well:</b>     | No. 8H                        | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | Gyro-MWD                      | <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) |  |
| 1,826.00     | 0.10       | 154.40               | 1,825.88      | 6.76             | -6.76         | 0.49          | 6.78                       | 175.84                 | 426,829.82         | 636,679.19        |  |
| 1,920.00     | 0.30       | 90.70                | 1,919.88      | 6.83             | -6.83         | 0.77          | 6.88                       | 173.55                 | 426,829.75         | 636,679.47        |  |
| 2,015.00     | 1.00       | 98.10                | 2,014.87      | 6.95             | -6.95         | 1.84          | 7.19                       | 165.16                 | 426,829.63         | 636,680.54        |  |
| 2,109.00     | 2.50       | 118.40               | 2,108.83      | 8.04             | -8.04         | 4.46          | 9.20                       | 151.01                 | 426,828.54         | 636,683.16        |  |
| 2,204.00     | 1.90       | 141.40               | 2,203.76      | 10.26            | -10.26        | 7.26          | 12.57                      | 144.71                 | 426,826.32         | 636,685.96        |  |
| 2,298.00     | 1.10       | 155.20               | 2,297.72      | 12.29            | -12.30        | 8.61          | 15.01                      | 144.99                 | 426,824.28         | 636,687.31        |  |
| 2,393.00     | 1.00       | 123.70               | 2,392.71      | 13.58            | -13.59        | 9.69          | 16.69                      | 144.51                 | 426,822.99         | 636,688.39        |  |
| 2,487.00     | 1.10       | 138.30               | 2,486.69      | 14.71            | -14.71        | 10.97         | 18.35                      | 143.30                 | 426,821.87         | 636,689.67        |  |
| 2,582.00     | 1.20       | 150.90               | 2,581.67      | 16.26            | -16.26        | 12.06         | 20.25                      | 143.45                 | 426,820.32         | 636,690.76        |  |
| 2,621.00     | 1.10       | 154.20               | 2,620.67      | 16.95            | -16.96        | 12.42         | 21.02                      | 143.78                 | 426,819.62         | 636,691.12        |  |
| 2,707.00     | 1.00       | 158.90               | 2,706.65      | 18.39            | -18.40        | 13.05         | 22.56                      | 144.66                 | 426,818.18         | 636,691.75        |  |
| 2,769.00     | 0.60       | 154.90               | 2,768.65      | 19.19            | -19.20        | 13.38         | 23.40                      | 145.12                 | 426,817.38         | 636,692.08        |  |
| 2,863.00     | 2.00       | 22.60                | 2,862.63      | 18.12            | -18.13        | 14.22         | 23.04                      | 141.89                 | 426,818.45         | 636,692.92        |  |
| 2,958.00     | 4.60       | 27.00                | 2,957.46      | 13.19            | -13.21        | 16.59         | 21.20                      | 128.52                 | 426,823.37         | 636,695.29        |  |
| 3,052.00     | 5.00       | 28.30                | 3,051.13      | 6.23             | -6.24         | 20.24         | 21.18                      | 107.14                 | 426,830.34         | 636,698.94        |  |
| 3,146.00     | 5.10       | 28.70                | 3,144.77      | -1.05            | 1.03          | 24.19         | 24.21                      | 87.56                  | 426,837.61         | 636,702.89        |  |
| 3,240.00     | 4.90       | 29.80                | 3,238.41      | -8.20            | 8.18          | 28.19         | 29.35                      | 73.82                  | 426,844.76         | 636,706.89        |  |
| 3,334.00     | 5.00       | 32.10                | 3,332.06      | -15.16           | 15.13         | 32.36         | 35.73                      | 64.94                  | 426,851.71         | 636,711.06        |  |
| 3,428.00     | 5.00       | 31.70                | 3,425.70      | -22.11           | 22.09         | 36.69         | 42.83                      | 58.95                  | 426,858.67         | 636,715.39        |  |
| 3,522.00     | 5.10       | 35.80                | 3,519.34      | -28.99           | 28.96         | 41.29         | 50.43                      | 54.95                  | 426,865.54         | 636,719.99        |  |
| 3,617.00     | 4.60       | 35.90                | 3,614.00      | -35.50           | 35.47         | 45.99         | 58.08                      | 52.36                  | 426,872.05         | 636,724.69        |  |
| 3,711.00     | 4.10       | 35.80                | 3,707.73      | -41.29           | 41.25         | 50.17         | 64.95                      | 50.57                  | 426,877.83         | 636,728.87        |  |
| 3,806.00     | 4.30       | 38.40                | 3,802.47      | -46.83           | 46.80         | 54.37         | 71.73                      | 49.28                  | 426,883.38         | 636,733.07        |  |
| 3,900.00     | 4.10       | 37.30                | 3,896.22      | -52.27           | 52.23         | 58.59         | 78.49                      | 48.29                  | 426,888.81         | 636,737.29        |  |
| 3,995.00     | 4.30       | 40.40                | 3,990.96      | -57.69           | 57.65         | 62.96         | 85.36                      | 47.52                  | 426,894.23         | 636,741.66        |  |
| 4,089.00     | 4.10       | 36.90                | 4,084.71      | -63.06           | 63.02         | 67.26         | 92.17                      | 46.87                  | 426,899.60         | 636,745.96        |  |
| 4,184.00     | 3.80       | 37.50                | 4,179.49      | -68.28           | 68.23         | 71.22         | 98.63                      | 46.23                  | 426,904.81         | 636,749.92        |  |

|                  |                               |                                     |                    |
|------------------|-------------------------------|-------------------------------------|--------------------|
| <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 @ 2932.50usft |
| <b>Site:</b>     | Sweet Tea Federal 24-29-31 WA | <b>MD Reference:</b>                | Well @ 2932.50usft |
| <b>Well:</b>     | No. 8H                        | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | Gyro-MWD                      | <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) |  |
| 4,278.00     | 3.70       | 41.00                | 4,273.28      | -73.04           | 72.99         | 75.10         | 104.73                     | 45.82                  | 426,909.57         | 636,753.80        |  |
| 4,373.00     | 3.40       | 38.80                | 4,368.10      | -77.55           | 77.50         | 78.88         | 110.58                     | 45.51                  | 426,914.08         | 636,757.58        |  |
| 4,467.00     | 3.40       | 40.30                | 4,461.94      | -81.85           | 81.80         | 82.43         | 116.13                     | 45.22                  | 426,918.38         | 636,761.13        |  |
| 4,561.00     | 3.20       | 44.70                | 4,555.78      | -85.85           | 85.79         | 86.08         | 121.53                     | 45.10                  | 426,922.37         | 636,764.78        |  |
| 4,656.00     | 3.20       | 45.60                | 4,650.63      | -89.59           | 89.53         | 89.84         | 126.83                     | 45.10                  | 426,926.11         | 636,768.54        |  |
| 4,750.00     | 3.80       | 31.20                | 4,744.46      | -94.09           | 94.03         | 93.32         | 132.48                     | 44.78                  | 426,930.61         | 636,772.02        |  |
| 4,845.00     | 3.70       | 32.00                | 4,839.26      | -99.39           | 99.32         | 96.58         | 138.54                     | 44.20                  | 426,935.90         | 636,775.28        |  |
| 4,939.00     | 3.40       | 36.00                | 4,933.08      | -104.22          | 104.15        | 99.83         | 144.26                     | 43.79                  | 426,940.73         | 636,778.53        |  |
| 5,033.00     | 3.30       | 37.60                | 5,026.91      | -108.62          | 108.55        | 103.11        | 149.72                     | 43.53                  | 426,945.13         | 636,781.81        |  |
| 5,127.00     | 3.80       | 21.70                | 5,120.74      | -113.66          | 113.58        | 105.92        | 155.31                     | 43.00                  | 426,950.16         | 636,784.62        |  |
| 5,222.00     | 3.70       | 19.20                | 5,215.53      | -119.48          | 119.40        | 108.09        | 161.06                     | 42.15                  | 426,955.98         | 636,786.79        |  |
| 5,316.00     | 3.10       | 16.60                | 5,309.37      | -124.78          | 124.70        | 109.81        | 166.16                     | 41.37                  | 426,961.28         | 636,788.51        |  |
| 5,411.00     | 4.40       | 27.90                | 5,404.16      | -130.46          | 130.39        | 112.25        | 172.05                     | 40.73                  | 426,966.97         | 636,790.95        |  |
| 5,505.00     | 4.40       | 30.30                | 5,497.89      | -136.77          | 136.69        | 115.76        | 179.12                     | 40.26                  | 426,973.27         | 636,794.46        |  |
| 5,599.00     | 4.00       | 31.10                | 5,591.63      | -142.69          | 142.61        | 119.27        | 185.91                     | 39.91                  | 426,979.19         | 636,797.97        |  |
| 5,693.00     | 3.90       | 34.40                | 5,685.41      | -148.14          | 148.05        | 122.77        | 192.33                     | 39.67                  | 426,984.63         | 636,801.47        |  |
| 5,788.00     | 3.90       | 37.00                | 5,780.19      | -153.39          | 153.30        | 126.54        | 198.78                     | 39.54                  | 426,989.88         | 636,805.24        |  |
| 5,883.00     | 3.40       | 34.40                | 5,875.00      | -158.29          | 158.20        | 130.08        | 204.81                     | 39.43                  | 426,994.78         | 636,808.78        |  |
| 5,978.00     | 3.30       | 42.80                | 5,969.84      | -162.63          | 162.53        | 133.53        | 210.35                     | 39.40                  | 426,999.11         | 636,812.23        |  |
| 6,072.00     | 2.90       | 45.10                | 6,063.70      | -166.29          | 166.20        | 137.05        | 215.41                     | 39.51                  | 427,002.78         | 636,815.75        |  |
| 6,167.00     | 1.60       | 52.50                | 6,158.62      | -168.80          | 168.70        | 139.80        | 219.10                     | 39.65                  | 427,005.28         | 636,818.50        |  |
| 6,261.00     | 1.20       | 148.00               | 6,252.60      | -168.76          | 168.66        | 141.37        | 220.07                     | 39.97                  | 427,005.24         | 636,820.07        |  |
| 6,355.00     | 0.40       | 258.70               | 6,346.60      | -167.86          | 167.77        | 141.57        | 219.51                     | 40.16                  | 427,004.35         | 636,820.27        |  |
| 6,450.00     | 0.90       | 266.90               | 6,441.59      | -167.76          | 167.66        | 140.50        | 218.74                     | 39.96                  | 427,004.24         | 636,819.20        |  |
| 6,544.00     | 1.00       | 266.80               | 6,535.58      | -167.67          | 167.57        | 138.94        | 217.68                     | 39.66                  | 427,004.15         | 636,817.64        |  |
| 6,638.00     | 1.30       | 249.90               | 6,629.56      | -167.26          | 167.16        | 137.12        | 216.21                     | 39.36                  | 427,003.74         | 636,815.82        |  |
| 6,733.00     | 1.10       | 250.80               | 6,724.54      | -166.59          | 166.49        | 135.25        | 214.50                     | 39.09                  | 427,003.07         | 636,813.95        |  |





# 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 @ 2932.50usft |
| <b>Site:</b>     | Sweet Tea Federal 24-29-31 WA | <b>MD Reference:</b>                | Well @ 2932.50usft |
| <b>Well:</b>     | No. 8H                        | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | Gyro-MWD                      | <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) |  |
| 6,827.00     | 1.10       | 275.40               | 6,818.52      | -166.37          | 166.28        | 133.50        | 213.24                     | 38.76                  | 427,002.86         | 636,812.20        |  |
| 6,921.00     | 1.70       | 271.00               | 6,912.49      | -166.48          | 166.39        | 131.20        | 211.90                     | 38.26                  | 427,002.97         | 636,809.90        |  |
| 7,016.00     | 0.70       | 321.80               | 7,007.47      | -166.96          | 166.87        | 129.43        | 211.18                     | 37.80                  | 427,003.45         | 636,808.13        |  |
| 7,110.00     | 1.30       | 334.30               | 7,101.46      | -168.37          | 168.28        | 128.62        | 211.80                     | 37.39                  | 427,004.86         | 636,807.32        |  |
| 7,205.00     | 1.60       | 313.20               | 7,196.43      | -170.25          | 170.16        | 127.18        | 212.44                     | 36.78                  | 427,006.74         | 636,805.88        |  |
| 7,300.00     | 1.10       | 289.30               | 7,291.40      | -171.46          | 171.37        | 125.36        | 212.32                     | 36.19                  | 427,007.95         | 636,804.06        |  |
| 7,394.00     | 1.00       | 255.90               | 7,385.39      | -171.55          | 171.47        | 123.71        | 211.44                     | 35.81                  | 427,008.05         | 636,802.41        |  |
| 7,488.00     | 1.20       | 228.90               | 7,479.37      | -170.71          | 170.62        | 122.17        | 209.85                     | 35.60                  | 427,007.20         | 636,800.87        |  |
| 7,583.00     | 1.10       | 221.40               | 7,574.35      | -169.37          | 169.28        | 120.82        | 207.98                     | 35.52                  | 427,005.86         | 636,799.52        |  |
| 7,677.00     | 1.20       | 343.70               | 7,668.34      | -169.64          | 169.55        | 119.95        | 207.69                     | 35.28                  | 427,006.13         | 636,798.65        |  |
| 7,772.00     | 0.70       | 344.20               | 7,763.33      | -171.15          | 171.06        | 119.51        | 208.68                     | 34.94                  | 427,007.64         | 636,798.21        |  |
| 7,866.00     | 1.60       | 35.00                | 7,857.31      | -172.78          | 172.69        | 120.10        | 210.35                     | 34.82                  | 427,009.27         | 636,798.80        |  |
| 7,960.00     | 1.20       | 37.50                | 7,951.28      | -174.63          | 174.55        | 121.46        | 212.65                     | 34.83                  | 427,011.13         | 636,800.16        |  |
| 8,055.00     | 0.70       | 342.40               | 8,046.27      | -175.98          | 175.89        | 121.89        | 214.00                     | 34.72                  | 427,012.47         | 636,800.59        |  |
| 8,149.00     | 2.00       | 51.10                | 8,140.25      | -177.55          | 177.47        | 122.99        | 215.92                     | 34.72                  | 427,014.05         | 636,801.69        |  |
| 8,244.00     | 2.10       | 84.90                | 8,235.19      | -178.75          | 178.66        | 126.01        | 218.63                     | 35.20                  | 427,015.24         | 636,804.71        |  |
| 8,339.00     | 1.50       | 78.70                | 8,330.14      | -179.15          | 179.06        | 128.97        | 220.67                     | 35.76                  | 427,015.64         | 636,807.67        |  |
| 8,433.00     | 0.90       | 83.00                | 8,424.12      | -179.48          | 179.39        | 130.91        | 222.08                     | 36.12                  | 427,015.97         | 636,809.61        |  |
| 8,528.00     | 0.30       | 26.90                | 8,519.12      | -179.80          | 179.71        | 131.76        | 222.83                     | 36.25                  | 427,016.29         | 636,810.46        |  |
| 8,622.00     | 1.30       | 319.00               | 8,613.11      | -180.82          | 180.73        | 131.17        | 223.31                     | 35.97                  | 427,017.31         | 636,809.87        |  |
| 8,717.00     | 1.40       | 14.10                | 8,708.09      | -182.76          | 182.67        | 130.75        | 224.64                     | 35.59                  | 427,019.25         | 636,809.45        |  |
| 8,812.00     | 1.20       | 59.90                | 8,803.06      | -184.39          | 184.29        | 131.89        | 226.63                     | 35.59                  | 427,020.87         | 636,810.59        |  |
| 8,906.00     | 1.40       | 63.80                | 8,897.04      | -185.39          | 185.29        | 133.77        | 228.54                     | 35.83                  | 427,021.87         | 636,812.47        |  |
| 9,001.00     | 0.50       | 43.00                | 8,992.03      | -186.20          | 186.11        | 135.10        | 229.97                     | 35.98                  | 427,022.69         | 636,813.80        |  |
| 9,095.00     | 0.20       | 177.50               | 9,086.02      | -186.34          | 186.25        | 135.38        | 230.25                     | 36.01                  | 427,022.83         | 636,814.08        |  |
| 9,190.00     | 0.10       | 159.50               | 9,181.02      | -186.10          | 186.00        | 135.42        | 230.08                     | 36.06                  | 427,022.58         | 636,814.12        |  |
| 9,236.00     | 0.30       | 193.30               | 9,227.02      | -185.94          | 185.85        | 135.41        | 229.94                     | 36.08                  | 427,022.43         | 636,814.11        |  |

**Company:** Marathon Oil  
**Project:** Eddy County, NM(NAD 83)  
**Site:** Sweet Tea Federal 24-29-31 WA  
**Well:** No. 8H  
**Wellbore:** OH  
**Design:** Gyro-MWD

**Local Co-ordinate Reference:** Well No. 8H  
**TVD Reference:** Well @ 2932.50usft  
**MD Reference:** Well @ 2932.50usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** 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) |  |
| 9,278.00     | 0.30       | 240.80               | 9,269.02      | -185.78          | 185.69        | 135.28        | 229.74                     | 36.08                  | 427,022.27         | 636,813.98        |  |
| 9,373.00     | 2.00       | 200.40               | 9,364.00      | -184.11          | 184.01        | 134.49        | 227.92                     | 36.16                  | 427,020.59         | 636,813.19        |  |
| 9,467.00     | 16.40      | 179.60               | 9,456.56      | -169.22          | 169.12        | 134.01        | 215.78                     | 38.39                  | 427,005.70         | 636,812.71        |  |
| 9,562.00     | 31.10      | 179.40               | 9,543.27      | -131.06          | 130.97        | 134.36        | 187.63                     | 45.73                  | 426,967.55         | 636,813.06        |  |
| 9,656.00     | 39.70      | 180.40               | 9,619.83      | -76.66           | 76.57         | 134.40        | 154.69                     | 60.33                  | 426,913.15         | 636,813.10        |  |
| 9,750.00     | 44.60      | 180.80               | 9,689.49      | -13.61           | 13.51         | 133.73        | 134.41                     | 84.23                  | 426,850.09         | 636,812.43        |  |
| 9,845.00     | 54.20      | 179.70               | 9,751.25      | 58.44            | -58.53        | 133.47        | 145.74                     | 113.68                 | 426,778.05         | 636,812.17        |  |
| 9,939.00     | 65.10      | 180.10               | 9,798.67      | 139.43           | -139.53       | 133.59        | 193.17                     | 136.24                 | 426,697.05         | 636,812.29        |  |
| 10,034.00    | 73.00      | 179.60               | 9,832.61      | 228.08           | -228.18       | 133.84        | 264.53                     | 149.61                 | 426,608.40         | 636,812.54        |  |
| 10,139.00    | 76.60      | 179.50               | 9,860.14      | 329.39           | -329.48       | 134.63        | 355.93                     | 157.77                 | 426,507.10         | 636,813.33        |  |
| 10,234.00    | 88.20      | 179.50               | 9,872.68      | 423.39           | -423.48       | 135.45        | 444.62                     | 162.26                 | 426,413.10         | 636,814.15        |  |
| 10,328.00    | 90.20      | 179.70               | 9,873.99      | 517.37           | -517.47       | 136.11        | 535.07                     | 165.26                 | 426,319.11         | 636,814.81        |  |
| 10,422.00    | 89.40      | 180.20               | 9,874.32      | 611.37           | -611.47       | 136.19        | 626.45                     | 167.44                 | 426,225.11         | 636,814.89        |  |
| 10,516.00    | 91.90      | 181.70               | 9,873.26      | 705.34           | -705.44       | 134.63        | 718.17                     | 169.19                 | 426,131.14         | 636,813.33        |  |
| 10,611.00    | 91.60      | 181.20               | 9,870.35      | 800.27           | -800.36       | 132.23        | 811.21                     | 170.62                 | 426,036.22         | 636,810.93        |  |
| 10,706.00    | 90.90      | 181.70               | 9,868.28      | 895.22           | -895.31       | 129.83        | 904.67                     | 171.75                 | 425,941.27         | 636,808.53        |  |
| 10,800.00    | 91.70      | 181.80               | 9,866.15      | 989.15           | -989.24       | 126.96        | 997.35                     | 172.69                 | 425,847.34         | 636,805.66        |  |
| 10,894.00    | 89.40      | 180.70               | 9,865.25      | 1,083.12         | -1,083.20     | 124.91        | 1,090.38                   | 173.42                 | 425,753.38         | 636,803.61        |  |
| 10,990.00    | 89.80      | 180.30               | 9,865.92      | 1,179.11         | -1,179.20     | 124.07        | 1,185.71                   | 173.99                 | 425,657.38         | 636,802.77        |  |
| 11,083.00    | 89.90      | 178.90               | 9,866.16      | 1,272.11         | -1,272.19     | 124.72        | 1,278.29                   | 174.40                 | 425,564.39         | 636,803.42        |  |
| 11,177.00    | 89.60      | 177.50               | 9,866.57      | 1,366.05         | -1,366.14     | 127.67        | 1,372.10                   | 174.66                 | 425,470.44         | 636,806.37        |  |
| 11,270.00    | 88.90      | 175.90               | 9,867.79      | 1,458.88         | -1,458.98     | 133.02        | 1,465.03                   | 174.79                 | 425,377.60         | 636,811.72        |  |
| 11,364.00    | 90.80      | 178.80               | 9,868.03      | 1,552.77         | -1,552.86     | 137.37        | 1,558.93                   | 174.94                 | 425,283.72         | 636,816.07        |  |
| 11,459.00    | 91.50      | 179.90               | 9,866.13      | 1,647.74         | -1,647.83     | 138.45        | 1,653.64                   | 175.20                 | 425,188.75         | 636,817.15        |  |
| 11,553.00    | 89.80      | 180.60               | 9,865.06      | 1,741.73         | -1,741.82     | 138.04        | 1,747.28                   | 175.47                 | 425,094.76         | 636,816.74        |  |
| 11,646.00    | 89.60      | 180.70               | 9,865.55      | 1,834.72         | -1,834.82     | 136.98        | 1,839.92                   | 175.73                 | 425,001.76         | 636,815.68        |  |
| 11,740.00    | 88.00      | 180.80               | 9,867.52      | 1,928.69         | -1,928.78     | 135.75        | 1,933.56                   | 175.97                 | 424,907.80         | 636,814.45        |  |

|                  |                               |                                     |                    |
|------------------|-------------------------------|-------------------------------------|--------------------|
| <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 @ 2932.50usft |
| <b>Site:</b>     | Sweet Tea Federal 24-29-31 WA | <b>MD Reference:</b>                | Well @ 2932.50usft |
| <b>Well:</b>     | No. 8H                        | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | Gyro-MWD                      | <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) |  |
| 11,835.00    | 87.90      | 182.10               | 9,870.92      | 2,023.60         | -2,023.69     | 133.35        | 2,028.08                   | 176.23                 | 424,812.89         | 636,812.05        |  |
| 11,929.00    | 91.50      | 180.80               | 9,871.41      | 2,117.55         | -2,117.64     | 130.97        | 2,121.69                   | 176.46                 | 424,718.94         | 636,809.67        |  |
| 12,023.00    | 91.70      | 180.50               | 9,868.78      | 2,211.51         | -2,211.60     | 129.91        | 2,215.41                   | 176.64                 | 424,624.98         | 636,808.61        |  |
| 12,117.00    | 91.10      | 181.10               | 9,866.49      | 2,305.47         | -2,305.56     | 128.59        | 2,309.14                   | 176.81                 | 424,531.02         | 636,807.29        |  |
| 12,211.00    | 89.50      | 180.90               | 9,865.99      | 2,399.45         | -2,399.54     | 126.95        | 2,402.90                   | 176.97                 | 424,437.04         | 636,805.65        |  |
| 12,306.00    | 92.10      | 181.10               | 9,864.67      | 2,494.42         | -2,494.51     | 125.30        | 2,497.66                   | 177.12                 | 424,342.07         | 636,804.00        |  |
| 12,401.00    | 90.50      | 180.40               | 9,862.51      | 2,589.39         | -2,589.47     | 124.05        | 2,592.44                   | 177.26                 | 424,247.11         | 636,802.75        |  |
| 12,494.00    | 90.60      | 180.20               | 9,861.62      | 2,682.38         | -2,682.47     | 123.57        | 2,685.31                   | 177.36                 | 424,154.11         | 636,802.27        |  |
| 12,589.00    | 89.10      | 178.70               | 9,861.87      | 2,777.37         | -2,777.46     | 124.48        | 2,780.25                   | 177.43                 | 424,059.12         | 636,803.18        |  |
| 12,682.00    | 88.40      | 178.10               | 9,863.90      | 2,870.31         | -2,870.40     | 127.07        | 2,873.21                   | 177.47                 | 423,966.18         | 636,805.77        |  |
| 12,776.00    | 88.40      | 177.90               | 9,866.52      | 2,964.21         | -2,964.31     | 130.35        | 2,967.17                   | 177.48                 | 423,872.27         | 636,809.05        |  |
| 12,870.00    | 88.80      | 180.70               | 9,868.82      | 3,058.17         | -3,058.26     | 131.50        | 3,061.09                   | 177.54                 | 423,778.32         | 636,810.20        |  |
| 12,964.00    | 88.50      | 180.60               | 9,871.03      | 3,152.14         | -3,152.23     | 130.43        | 3,154.93                   | 177.63                 | 423,684.35         | 636,809.13        |  |
| 13,057.00    | 89.30      | 181.00               | 9,872.82      | 3,245.11         | -3,245.20     | 129.14        | 3,247.77                   | 177.72                 | 423,591.38         | 636,807.84        |  |
| 13,151.00    | 93.00      | 181.60               | 9,870.93      | 3,339.05         | -3,339.14     | 127.00        | 3,341.56                   | 177.82                 | 423,497.44         | 636,805.70        |  |
| 13,245.00    | 92.50      | 181.10               | 9,866.42      | 3,432.92         | -3,433.01     | 124.79        | 3,435.27                   | 177.92                 | 423,403.57         | 636,803.49        |  |
| 13,340.00    | 91.10      | 180.90               | 9,863.44      | 3,527.86         | -3,527.94     | 123.14        | 3,530.09                   | 178.00                 | 423,308.64         | 636,801.84        |  |
| 13,434.00    | 91.40      | 181.90               | 9,861.39      | 3,621.81         | -3,621.89     | 120.84        | 3,623.91                   | 178.09                 | 423,214.69         | 636,799.54        |  |
| 13,528.00    | 91.50      | 181.20               | 9,859.01      | 3,715.74         | -3,715.83     | 118.30        | 3,717.71                   | 178.18                 | 423,120.75         | 636,797.00        |  |
| 13,623.00    | 88.30      | 179.30               | 9,859.18      | 3,810.73         | -3,810.81     | 117.88        | 3,812.63                   | 178.23                 | 423,025.77         | 636,796.58        |  |
| 13,718.00    | 87.80      | 179.70               | 9,862.41      | 3,905.67         | -3,905.75     | 118.71        | 3,907.55                   | 178.26                 | 422,930.83         | 636,797.41        |  |
| 13,812.00    | 88.70      | 179.70               | 9,865.28      | 3,999.62         | -3,999.70     | 119.20        | 4,001.48                   | 178.29                 | 422,836.88         | 636,797.90        |  |
| 13,907.00    | 88.90      | 179.70               | 9,867.27      | 4,094.60         | -4,094.68     | 119.70        | 4,096.43                   | 178.33                 | 422,741.90         | 636,798.40        |  |
| 14,001.00    | 87.40      | 178.90               | 9,870.30      | 4,188.54         | -4,188.62     | 120.85        | 4,190.36                   | 178.35                 | 422,647.96         | 636,799.55        |  |
| 14,073.00    | 88.40      | 178.70               | 9,872.94      | 4,260.47         | -4,260.56     | 122.36        | 4,262.31                   | 178.36                 | 422,576.02         | 636,801.06        |  |
| 14,167.00    | 89.60      | 178.60               | 9,874.58      | 4,354.43         | -4,354.51     | 124.57        | 4,356.30                   | 178.36                 | 422,482.07         | 636,803.27        |  |
| 14,262.00    | 91.20      | 178.40               | 9,873.92      | 4,449.39         | -4,449.48     | 127.06        | 4,451.29                   | 178.36                 | 422,387.10         | 636,805.76        |  |

**Company:** Marathon Oil  
**Project:** Eddy County, NM(NAD 83)  
**Site:** Sweet Tea Federal 24-29-31 WA  
**Well:** No. 8H  
**Wellbore:** OH  
**Design:** Gyro-MWD

**Local Co-ordinate Reference:** Well No. 8H  
**TVD Reference:** Well @ 2932.50usft  
**MD Reference:** Well @ 2932.50usft  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature  
**Database:** 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) |  |
| 14,357.00    | 90.60      | 178.20               | 9,872.43      | 4,544.33         | -4,544.42     | 129.87        | 4,546.28                   | 178.36                 | 422,292.16         | 636,808.57        |  |
| 14,451.00    | 91.20      | 179.80               | 9,870.95      | 4,638.30         | -4,638.39     | 131.51        | 4,640.26                   | 178.38                 | 422,198.19         | 636,810.21        |  |
| 14,545.00    | 90.80      | 179.30               | 9,869.31      | 4,732.28         | -4,732.38     | 132.25        | 4,734.22                   | 178.40                 | 422,104.20         | 636,810.95        |  |
| 14,640.00    | 89.70      | 178.60               | 9,868.89      | 4,827.26         | -4,827.36     | 133.99        | 4,829.22                   | 178.41                 | 422,009.22         | 636,812.69        |  |
| 14,736.00    | 90.10      | 180.70               | 9,869.06      | 4,923.25         | -4,923.35     | 134.58        | 4,925.19                   | 178.43                 | 421,913.23         | 636,813.28        |  |
| 14,829.00    | 88.10      | 179.50               | 9,870.52      | 5,016.24         | -5,016.33     | 134.42        | 5,018.13                   | 178.47                 | 421,820.25         | 636,813.12        |  |
| 14,924.00    | 88.10      | 180.50               | 9,873.67      | 5,111.18         | -5,111.28     | 134.42        | 5,113.04                   | 178.49                 | 421,725.30         | 636,813.12        |  |
| 15,018.00    | 91.80      | 180.90               | 9,873.75      | 5,205.16         | -5,205.25     | 133.27        | 5,206.96                   | 178.53                 | 421,631.33         | 636,811.97        |  |
| 15,113.00    | 93.10      | 181.70               | 9,869.69      | 5,300.05         | -5,300.14     | 131.12        | 5,301.76                   | 178.58                 | 421,536.44         | 636,809.82        |  |
| 15,208.00    | 92.60      | 181.80               | 9,864.97      | 5,394.89         | -5,394.98     | 128.22        | 5,396.50                   | 178.64                 | 421,441.60         | 636,806.92        |  |
| 15,302.00    | 91.00      | 180.30               | 9,862.02      | 5,488.82         | -5,488.91     | 126.50        | 5,490.37                   | 178.68                 | 421,347.67         | 636,805.20        |  |
| 15,397.00    | 91.30      | 181.60               | 9,860.11      | 5,583.79         | -5,583.88     | 124.92        | 5,585.27                   | 178.72                 | 421,252.70         | 636,803.62        |  |
| 15,492.00    | 88.20      | 179.90               | 9,860.53      | 5,678.76         | -5,678.85     | 123.68        | 5,680.20                   | 178.75                 | 421,157.73         | 636,802.38        |  |
| 15,586.00    | 86.90      | 179.40               | 9,864.54      | 5,772.67         | -5,772.76     | 124.25        | 5,774.10                   | 178.77                 | 421,063.82         | 636,802.95        |  |
| 15,703.00    | 87.30      | 177.60               | 9,870.46      | 5,889.48         | -5,889.57     | 127.31        | 5,890.94                   | 178.76                 | 420,947.01         | 636,806.01        |  |
| 15,798.00    | 89.80      | 178.10               | 9,872.87      | 5,984.37         | -5,984.46     | 130.87        | 5,985.89                   | 178.75                 | 420,852.12         | 636,809.57        |  |
| 15,892.00    | 91.40      | 179.00               | 9,871.88      | 6,078.33         | -6,078.42     | 133.25        | 6,079.88                   | 178.74                 | 420,758.16         | 636,811.95        |  |
| 15,986.00    | 91.90      | 181.30               | 9,869.18      | 6,172.28         | -6,172.38     | 133.01        | 6,173.81                   | 178.77                 | 420,664.20         | 636,811.71        |  |
| 16,080.00    | 90.40      | 180.10               | 9,867.29      | 6,266.25         | -6,266.35     | 131.86        | 6,267.73                   | 178.79                 | 420,570.23         | 636,810.56        |  |
| 16,174.00    | 90.60      | 181.50               | 9,866.47      | 6,360.24         | -6,360.33     | 130.55        | 6,361.67                   | 178.82                 | 420,476.25         | 636,809.25        |  |
| 16,270.00    | 90.00      | 181.90               | 9,865.97      | 6,456.20         | -6,456.29     | 127.70        | 6,457.55                   | 178.87                 | 420,380.29         | 636,806.40        |  |
| 16,363.00    | 90.60      | 182.40               | 9,865.48      | 6,549.13         | -6,549.22     | 124.21        | 6,550.40                   | 178.91                 | 420,287.36         | 636,802.91        |  |
| 16,458.00    | 90.10      | 182.60               | 9,864.90      | 6,644.04         | -6,644.13     | 120.07        | 6,645.21                   | 178.96                 | 420,192.45         | 636,798.77        |  |
| 16,551.00    | 90.20      | 180.20               | 9,864.66      | 6,737.01         | -6,737.09     | 117.79        | 6,738.12                   | 179.00                 | 420,099.49         | 636,796.49        |  |
| 16,646.00    | 90.60      | 180.50               | 9,863.99      | 6,832.00         | -6,832.09     | 117.21        | 6,833.09                   | 179.02                 | 420,004.49         | 636,795.91        |  |
| 16,740.00    | 90.30      | 180.90               | 9,863.25      | 6,925.99         | -6,926.08     | 116.07        | 6,927.05                   | 179.04                 | 419,910.50         | 636,794.77        |  |
| 16,834.00    | 88.60      | 179.90               | 9,864.16      | 7,019.98         | -7,020.07     | 115.41        | 7,021.01                   | 179.06                 | 419,816.51         | 636,794.11        |  |

|                  |                               |                                     |                    |
|------------------|-------------------------------|-------------------------------------|--------------------|
| <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 @ 2932.50usft |
| <b>Site:</b>     | Sweet Tea Federal 24-29-31 WA | <b>MD Reference:</b>                | Well @ 2932.50usft |
| <b>Well:</b>     | No. 8H                        | <b>North Reference:</b>             | Grid               |
| <b>Wellbore:</b> | OH                            | <b>Survey Calculation Method:</b>   | Minimum Curvature  |
| <b>Design:</b>   | Gyro-MWD                      | <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) |  |
| 16,927.00                     | 88.30      | 180.60               | 9,866.67      | 7,112.95         | -7,113.03     | 115.00        | 7,113.96                   | 179.07                 | 419,723.55         | 636,793.70        |  |
| 17,021.00                     | 88.00      | 181.40               | 9,869.71      | 7,206.89         | -7,206.97     | 113.36        | 7,207.86                   | 179.10                 | 419,629.61         | 636,792.06        |  |
| 17,115.00                     | 86.50      | 181.40               | 9,874.22      | 7,300.75         | -7,300.83     | 111.07        | 7,301.67                   | 179.13                 | 419,535.75         | 636,789.77        |  |
| 17,117.00                     | 86.50      | 181.40               | 9,874.34      | 7,302.74         | -7,302.82     | 111.02        | 7,303.67                   | 179.13                 | 419,533.76         | 636,789.72        |  |
| <b>Last Survey: 17117' MD</b> |            |                      |               |                  |               |               |                            |                        |                    |                   |  |
| 17,174.00                     | 86.50      | 181.40               | 9,877.82      | 7,359.62         | -7,359.70     | 109.63        | 7,360.52                   | 179.15                 | 419,476.88         | 636,788.33        |  |
| <b>PTB: 17174' MD</b>         |            |                      |               |                  |               |               |                            |                        |                    |                   |  |

| Design Annotations          |                             |                   |                 |                               |  |
|-----------------------------|-----------------------------|-------------------|-----------------|-------------------------------|--|
| Measured<br>Depth<br>(usft) | Vertical<br>Depth<br>(usft) | Local Coordinates |                 |                               |  |
|                             |                             | +N/-S<br>(usft)   | +E/-W<br>(usft) | Comment                       |  |
| 457.00                      | 456.98                      | -0.26             | 1.69            | Pro MWD First Survey: 457' MD |  |
| 17,117.00                   | 9,874.34                    | -7,302.82         | 111.02          | Last Survey: 17117' MD        |  |
| 17,174.00                   | 9,877.82                    | -7,359.70         | 109.63          | PTB: 17174' MD                |  |