



## Certificate of Analysis

Number: 6030-20030046-001A

Artesia Laboratory

200 E Main St.

Artesia, NM 88210

Phone 575-746-3481

Teresa Edwards  
Marathon Oil Corporation  
4111 S. Tidwell  
Carlsbad, NM 88220

Mar. 12, 2020

Station Name: Black River 3, 7 Facility Gas Sales 2  
Station Number: 18045GSA2  
Station Location: Marathon  
Sample Point: RGA  
Type of Sample: Spot-Cylinder  
Heat Trace Used: N/A  
Sampling Method: Fill and Purge  
Sampling Company: SPL  
Analyzed: 03/11/2020 14:46:19 by AH

Sampled By: Jonah Reza  
Sample Of: Gas Spot  
Sample Date: 03/04/2020 02:01  
Sample Conditions: 75.32 psig, @ 73 °F Ambient: 48 °F  
Effective Date: 03/04/2020 02:01  
Method: GPA-2261M  
Cylinder No: 1111-002599  
Instrument: defaultStringValue  
Last Inst. Cal.: 03/09/2020 0:00 AM

## Analytical Data

| Components     | Un-normalized<br>Mol % | Mol. %  | Wt. %   | GPM at<br>14.65 psia |                |       |
|----------------|------------------------|---------|---------|----------------------|----------------|-------|
| Nitrogen       | 1.222                  | 1.232   | 1.592   |                      | GPM TOTAL C2+  | 6.227 |
| Methane        | 76.199                 | 76.809  | 56.853  |                      | GPM TOTAL C3+  | 3.047 |
| Carbon Dioxide | 0.116                  | 0.117   | 0.238   |                      | GPM TOTAL iC5+ | 0.662 |
| Ethane         | 11.819                 | 11.914  | 16.529  | 3.180                |                |       |
| Propane        | 5.561                  | 5.606   | 11.406  | 1.542                |                |       |
| Iso-butane     | 0.804                  | 0.810   | 2.172   | 0.265                |                |       |
| n-Butane       | 1.821                  | 1.836   | 4.924   | 0.578                |                |       |
| Iso-pentane    | 0.454                  | 0.458   | 1.525   | 0.167                |                |       |
| n-Pentane      | 0.487                  | 0.491   | 1.635   | 0.178                |                |       |
| Hexanes Plus   | 0.721                  | 0.727   | 3.126   | 0.317                |                |       |
|                | 99.204                 | 100.000 | 100.000 | 6.227                |                |       |

## Calculated Physical Properties

|                             |              |            |
|-----------------------------|--------------|------------|
|                             | <b>Total</b> | <b>C6+</b> |
| Relative Density Real Gas   | 0.7509       | 3.2176     |
| Calculated Molecular Weight | 21.67        | 93.19      |
| Compressibility Factor      | 0.9962       |            |

## GPA 2172 Calculation:

Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia & 60°F

|                                     |        |        |
|-------------------------------------|--------|--------|
| Real Gas Dry BTU                    | 1290   | 5113   |
| Water Sat. Gas Base BTU             | 1268   | 5024   |
| Ideal, Gross HV - Dry at 14.65 psia | 1285.2 | 5113.2 |
| Ideal, Gross HV - Wet               | 1262.7 |        |

**Comments:** H2S Field Content 0 ppm  
Mcf/day 1865.81

Hydrocarbon Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

|                                     |           |
|-------------------------------------|-----------|
| Flaring/Venting Event Volume (MCF): | 52.18     |
| Flare or vent:                      | Flare     |
| Date:                               | 11/1/2021 |
| Time discovered:                    | 12:24 AM  |
| Time terminated:                    | 7:16 AM   |
| Total Duration (hrs):               | 6:52      |

**District I**

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

**District II**

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Phone:(575) 748-1283 Fax:(575) 748-9720

**District III**

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone:(505) 334-6178 Fax:(505) 334-6170

**District IV**

1220 S. St Francis Dr., Santa Fe, NM 87505  
Phone:(505) 476-3470 Fax:(505) 476-3462

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

QUESTIONS

Action 61664

**QUESTIONS**

|                                                                                        |                                                        |
|----------------------------------------------------------------------------------------|--------------------------------------------------------|
| Operator:<br>MARATHON OIL PERMIAN LLC<br>990 Town & Country Blvd.<br>Houston, TX 77024 | OGRID:<br>372098                                       |
|                                                                                        | Action Number:<br>61664                                |
|                                                                                        | Action Type:<br>[C-129] Venting and/or Flaring (C-129) |

**QUESTIONS****Prerequisites**

Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.

|                   |                                                  |
|-------------------|--------------------------------------------------|
| Incident Well     | Not answered.                                    |
| Incident Facility | [fAPP2125247203] BLACK RIVER 15 10 STATE 3H7H FS |

**Determination of Reporting Requirements**

Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.

|                                                                                                                                                                                                                                                                                              |                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Was or is this venting and/or flaring caused by an emergency or malfunction                                                                                                                                                                                                                  | Yes                                               |
| Did or will this venting and/or flaring last eight hours or more cumulatively within any 24-hour period from a single event                                                                                                                                                                  | No                                                |
| Is this considered a submission for a venting and/or flaring event                                                                                                                                                                                                                           | Yes, minor venting and/or flaring of natural gas. |
| An operator shall file a form C-141 instead of a form C-129 for a release that, includes liquid during venting and/or flaring that is or may be a major or minor release under 19.15.29.7 NMAC.                                                                                              |                                                   |
| Was there or will there be at least 50 MCF of natural gas vented and/or flared during this event                                                                                                                                                                                             | Yes                                               |
| Did this venting and/or flaring result in the release of ANY liquids (not fully and/or completely flared) that reached (or has a chance of reaching) the ground, a surface, a watercourse, or otherwise, with reasonable probability, endanger public health, the environment or fresh water | No                                                |
| Was the venting and/or flaring within an incorporated municipal boundary or withing 300 feet from an occupied permanent residence, school, hospital, institution or church in existence                                                                                                      | No                                                |

**Equipment Involved**

|                                                           |               |
|-----------------------------------------------------------|---------------|
| Primary Equipment Involved                                | Not answered. |
| Additional details for Equipment Involved. Please specify | Not answered. |

**Representative Compositional Analysis of Vented or Flared Natural Gas**

Please provide the mole percent for the percentage questions in this group.

|                                                              |    |
|--------------------------------------------------------------|----|
| Methane (CH4) percentage                                     | 77 |
| Nitrogen (N2) percentage, if greater than one percent        | 1  |
| Hydrogen Sulfide (H2S) PPM, rounded up                       | 0  |
| Carbon Dioxide (CO2) percentage, if greater than one percent | 0  |
| Oxygen (O2) percentage, if greater than one percent          | 0  |

If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.

|                                                     |               |
|-----------------------------------------------------|---------------|
| Methane (CH4) percentage quality requirement        | Not answered. |
| Nitrogen (N2) percentage quality requirement        | Not answered. |
| Hydrogen Sulfide (H2S) PPM quality requirement      | Not answered. |
| Carbon Dioxide (CO2) percentage quality requirement | Not answered. |
| Oxygen (O2) percentage quality requirement          | Not answered. |

**Date(s) and Time(s)**

|                                                         |            |
|---------------------------------------------------------|------------|
| Date venting and/or flaring was discovered or commenced | 11/01/2021 |
| Time venting and/or flaring was discovered or commenced | 12:24 AM   |
| Time venting and/or flaring was terminated              | 07:16 AM   |
| Cumulative hours during this event                      | 7          |

**Measured or Estimated Volume of Vented or Flared Natural Gas**

|                                  |               |
|----------------------------------|---------------|
| Natural Gas Vented (Mcf) Details | Not answered. |
|----------------------------------|---------------|

|                                                                           |                                                                                                                       |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Natural Gas Flared (Mcf) Details                                          | Cause: Equipment Failure   Producing Well   Natural Gas Flared   Released: 52 Mcf   Recovered: 0 Mcf   Lost: 52 Mcf ] |
| Other Released Details                                                    | Not answered.                                                                                                         |
| Additional details for Measured or Estimated Volume(s). Please specify    | Not answered.                                                                                                         |
| Is this a gas only submission (i.e. only significant Mcf values reported) | Yes, according to supplied volumes this appears to be a "gas only" report.                                            |

**Venting or Flaring Resulting from Downstream Activity**

|                                                                            |               |
|----------------------------------------------------------------------------|---------------|
| Was or is this venting and/or flaring a result of downstream activity      | Not answered. |
| Was notification of downstream activity received by you or your operator   | Not answered. |
| Downstream OGRID that should have notified you or your operator            | Not answered. |
| Date notified of downstream activity requiring this venting and/or flaring | Not answered. |
| Time notified of downstream activity requiring this venting and/or flaring | Not answered. |

**Steps and Actions to Prevent Waste**

|                                                                                                                                |                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|
| For this event, the operator could not have reasonably anticipated the current event and it was beyond the operator's control. | True                                                                                                     |
| Please explain reason for why this event was beyond your operator's control                                                    | Equipment failure                                                                                        |
| Steps taken to limit the duration and magnitude of venting and/or flaring                                                      | As soon as flaring due to an equipment failure was identified, repairs were made as soon as practicable. |
| Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring                                     | As soon as the equipment failure was found, repairs were made.                                           |

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CONDITIONS  
  
Action 61664

CONDITIONS

|                                                                                        |                                                        |
|----------------------------------------------------------------------------------------|--------------------------------------------------------|
| Operator:<br>MARATHON OIL PERMIAN LLC<br>990 Town & Country Blvd.<br>Houston, TX 77024 | OGRID:<br>372098                                       |
|                                                                                        | Action Number:<br>61664                                |
|                                                                                        | Action Type:<br>[C-129] Venting and/or Flaring (C-129) |

CONDITIONS

| Created By | Condition                                                                                                                                                                          | Condition Date |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| icastro    | If the information provided in this report requires an amendment, submit a [C-129] Amend Venting and/or Flaring Incident (C-129A), utilizing your incident number from this event. | 11/16/2021     |