



## Certificate of Analysis

Number: 6030-23120311-001A

Artesia Laboratory

200 E Main St.

Artesia, NM 88210

Phone 575-746-3481

Chandler Montgomery  
Occidental Petroleum  
1502 W Commerce Dr.  
Carlsbad, NM 88220

Jan. 11, 2024

Field: PERMIAN\_RESOURCES  
Station Name: Sand Dunes CTB Check  
Station Number: 17000C  
Station Location: OP-L0901-BT002  
Sample Point: Meter  
Formation: NEW\_MEXICO  
County:  
Well Name: CTB  
Type of Sample: : Spot-Cylinder  
Heat Trace Used: N/A  
Sampling Method: : Fill and Purge  
Sampling Company: : OXY

Sampled By: JE  
Sample Of: Gas Spot  
Sample Date: 12/28/2023 09:20  
Sample Conditions: 88 psig, @ 68 °F Ambient: 31 °F  
Effective Date: 12/28/2023 09:20  
Flow Rate: 17996 MSCFD  
Method: GPA-2261M  
Cylinder No: 5030-01063  
Instrument: 70104251 (Inficon GC-MicroFusion)  
Last Inst. Cal.: 01/09/2024 0:00 AM  
Analyzed: 01/09/2024 08:30:50 by EBH

## Analytical Data

| Components       | Un-normalized<br>Mol % | Mol. %   | Wt. %    | GPM at<br>14.65 psia |
|------------------|------------------------|----------|----------|----------------------|
| Hydrogen Sulfide | 0.0000                 | 0.0000   | 0.0000   |                      |
| Nitrogen         | 1.2725                 | 1.3037   | 1.5990   |                      |
| Carbon Dioxide   | 0.5710                 | 0.5850   | 1.1272   |                      |
| Methane          | 70.6744                | 72.4044  | 50.8552  |                      |
| Ethane           | 12.9937                | 13.3118  | 17.5248  | 3.555                |
| Propane          | 7.3509                 | 7.5308   | 14.5390  | 2.072                |
| Iso-Butane       | 0.8677                 | 0.8889   | 2.2620   | 0.290                |
| n-Butane         | 2.1166                 | 2.1684   | 5.5180   | 0.683                |
| Iso-Pentane      | 0.4679                 | 0.4794   | 1.5143   | 0.175                |
| n-Pentane        | 0.5187                 | 0.5314   | 1.6786   | 0.192                |
| Hexanes          | 0.3367                 | 0.3449   | 1.3013   | 0.142                |
| Heptanes         | 0.2976                 | 0.3049   | 1.3376   | 0.140                |
| Octanes          | 0.1258                 | 0.1289   | 0.6447   | 0.066                |
| Nonanes Plus     | 0.0170                 | 0.0175   | 0.0983   | 0.010                |
|                  | 97.6105                | 100.0000 | 100.0000 | 7.325                |

|                                       |              |            |
|---------------------------------------|--------------|------------|
| <b>Calculated Physical Properties</b> | <b>Total</b> | <b>C9+</b> |
| Calculated Molecular Weight           | 22.84        | 128.26     |
| Compressibility Factor                | 0.9957       |            |
| Relative Density Real Gas             | 0.7917       | 4.4283     |

## GPA 2172 Calculation:

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

|                                     |        |        |
|-------------------------------------|--------|--------|
| Real Gas Dry BTU                    | 1340.5 | 6974.4 |
| Water Sat. Gas Base BTU             | 1317.6 | 6852.4 |
| Ideal, Gross HV - Dry at 14.65 psia | 1334.7 | 6974.4 |
| Ideal, Gross HV - Wet               | 1311.4 | 6852.4 |

**Comments:** H2S Field Content 0 ppm  
FMP/LSE NM40659

Hydrocarbon Laboratory Manager

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

**UPSET FLARING EVENT SPECIFIC JUSTIFICATIONS FORM****Facility:** Sand Dunes South Corridor CTB**Flare Date:** 03/12/2024**Duration of Event:** 45 Minutes**MCF Flared:** 93**Start Time:** 09:05 AM**End Time:** 09:50 AM**Cause:** Emergency Flare > VRU Equipment Issue**Method of Flared Gas Measurement:** Gas Flare Meter

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**1. Reason why this event was beyond Operator's control:**

This emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control and did not stem from activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices. Oxy engages in respectable and good facility operation practices while also maintaining its continuous facility equipment preventative maintenance program. In this case, there was a sudden and unexpected VRU malfunction, which then triggered a flaring event to occur. This event is out of OXY's control yet OXY made every effort to control and minimize emissions as much as possible.

**2. Steps Taken to limit duration and magnitude of venting or flaring:**

It is OXY's policy to route its stranded gas to a flare during an unforeseen and unavoidable emergency or malfunction, that is beyond Oxy's control to avoid, prevent or foresee, to minimize emissions as much as possible as part of the overall steps taken to limit duration and magnitude of flaring. The flare at this facility has a 98% combustion efficiency to lessen emissions as much as possible. In this case, there was a sudden and unexpected VRU malfunction, which then triggered a flaring event to occur. As soon as flaring occurred, the facility's well optimizer adjusted injection rates, which prompted flaring to cease a short time later. Notwithstanding proper VRU design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable, and unexpected which can cause VRU unit malfunctions to occur without warning or advance notice. VRU's are designed to operate in a precise manner and when malfunctions occur, it disrupts the VRU unit's operating manner causing an automatic shutdown of the unit. This event is out of OXY's control yet OXY made every effort to control and minimize emissions as much as possible.

**3. Corrective Actions taken to eliminate the cause and reoccurrence of venting or flaring:**

Oxy is limited in the corrective actions available to them to eliminate the cause and potential reoccurrence of VRU malfunctions as notwithstanding VRU design and operation, VRU's are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause VRU malfunctions to occur, thereby, triggering the unit to automatically shut down. Oxy continually strives to maintain and operate all its equipment in a manner consistent with good practices for minimizing emissions and reducing the number of emission events. Oxy has a strong and positive equipment preventative maintenance program in place.

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**District IV**  
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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**

DEFINITIONS

Action 327073

DEFINITIONS

|                                                                    |                                                        |
|--------------------------------------------------------------------|--------------------------------------------------------|
| Operator:<br>OXY USA INC<br>P.O. Box 4294<br>Houston, TX 772104294 | OGRID:<br>16696                                        |
|                                                                    | Action Number:<br>327073                               |
|                                                                    | Action Type:<br>[C-129] Venting and/or Flaring (C-129) |

DEFINITIONS

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For the sake of brevity and completeness, please allow for the following in all groups of questions and for the rest of this application: <ul style="list-style-type: none"><li>• this application's operator, hereinafter "this operator";</li><li>• venting and/or flaring, hereinafter "vent or flare";</li><li>• any notification or report(s) of the C-129 form family, hereinafter "any C-129 forms";</li><li>• the statements in (and/or attached to) this, hereinafter "the statements in this";</li><li>• and the past tense will be used in lieu of mixed past/present tense questions and statements.</li></ul> |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

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QUESTIONS

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QUESTIONS

|                                                                    |                                                        |
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|                                                                    | Action Number:<br>327073                               |
|                                                                    | Action Type:<br>[C-129] Venting and/or Flaring (C-129) |

QUESTIONS

|                                                                                                                                                                                            |                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Prerequisites</b><br>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                                                                                                                                                                              | Unavailable.                                   |
| Incident Facility                                                                                                                                                                          | [fAPP2127048458] Sand Dunes South Corridor CTB |

|                                                                                                                                                                                                                                                                                     |                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Determination of Reporting Requirements</b><br>Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.                                                                                               |                                                   |
| Was this vent or flare caused by an emergency or malfunction                                                                                                                                                                                                                        | Yes                                               |
| Did this vent or flare last eight hours or more cumulatively within any 24-hour period from a single event                                                                                                                                                                          | No                                                |
| Is this considered a submission for a vent or flare 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 at least 50 MCF of natural gas vented and/or flared during this event                                                                                                                                                                                                     | Yes                                               |
| Did this vent or flare 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 vent or flare within an incorporated municipal boundary or withing 300 feet from an occupied permanent residence, school, hospital, institution or church in existence                                                                                                      | No                                                |

|                                                           |                                       |
|-----------------------------------------------------------|---------------------------------------|
| <b>Equipment Involved</b>                                 |                                       |
| Primary Equipment Involved                                | Other (Specify)                       |
| Additional details for Equipment Involved. Please specify | Emergency Flare > VRU Equipment Issue |

|                                                                                                                                                             |               |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>Representative Compositional Analysis of Vented or Flared Natural Gas</b><br>Please provide the mole percent for the percentage questions in this group. |               |
| Methane (CH4) percentage                                                                                                                                    | 72            |
| Nitrogen (N2) percentage, if greater than one percent                                                                                                       | 1             |
| Hydrogen Sulfide (H2S) PPM, rounded up                                                                                                                      | 0             |
| Carbon Dioxide (C02) percentage, if greater than one percent                                                                                                | 1             |
| 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 Sufide (H2S) PPM quality requirement                                                                                                               | Not answered. |
| Carbon Dioxide (C02) percentage quality requirement                                                                                                         | Not answered. |
| Oxygen (O2) percentage quality requirement                                                                                                                  | Not answered. |

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QUESTIONS, Page 2  
  
Action 327073

**QUESTIONS (continued)**

|                                                                    |                                                        |
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|                                                                    | Action Number:<br>327073                               |
|                                                                    | Action Type:<br>[C-129] Venting and/or Flaring (C-129) |

**QUESTIONS**

| Date(s) and Time(s)                            |            |
|------------------------------------------------|------------|
| Date vent or flare was discovered or commenced | 03/12/2024 |
| Time vent or flare was discovered or commenced | 09:05 AM   |
| Time vent or flare was terminated              | 09:50 AM   |
| Cumulative hours during this event             | 1          |

| Measured or Estimated Volume of Vented or Flared Natural Gas              |                                                                                                           |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Natural Gas Vented (Mcf) Details                                          | Not answered.                                                                                             |
| Natural Gas Flared (Mcf) Details                                          | Cause: Other   Other (Specify)   Natural Gas Flared   Released: 93 Mcf   Recovered: 0 Mcf   Lost: 93 Mcf. |
| Other Released Details                                                    | Not answered.                                                                                             |
| Additional details for Measured or Estimated Volume(s). Please specify    | Gas Flare Meter                                                                                           |
| 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 this vent or flare a result of downstream activity            | No            |
| Was notification of downstream activity received by this operator | Not answered. |
| Downstream OGRID that should have notified this operator          | Not answered. |
| Date notified of downstream activity requiring this vent or flare | Not answered. |
| Time notified of downstream activity requiring this vent or flare | Not answered. |

| Steps and Actions to Prevent Waste                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| For this event, this operator could not have reasonably anticipated the current event and it was beyond this operator's control. | True                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Please explain reason for why this event was beyond this operator's control                                                      | This emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control and did not stem from activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices. Oxy engages in respectable and good facility operation practices while also maintaining its continuous facility equipment preventative maintenance program. In this case, there was a sudden and unexpected VRU malfunction, which then triggered a flaring event to occur. This event is out of OXY's control yet OXY made every effort to control and minimize emissions as much as possible.                                                                                                                                                                                                                                                                    |
| Steps taken to limit the duration and magnitude of vent or flare                                                                 | It is OXY's policy to route its stranded gas to a flare during an unforeseen and unavoidable emergency or malfunction, that is beyond Oxy's control to avoid, prevent or foresee, to minimize emissions as much as possible as part of the overall steps taken to limit duration and magnitude of flaring. The flare at this facility has a 98% combustion efficiency to lessen emissions as much as possible. In this case, there was a sudden and unexpected VRU malfunction, which then triggered a flaring event to occur. As soon as flaring occurred, the facility's well optimizer adjusted injection rates, which prompted flaring to cease a short time later. Notwithstanding proper VRU design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable, and unexpected which can cause VRU unit malfunctions to occur without warning or advance notice. VRU's are designed to operate in a precise manner and when malfunctions occur, it disrupts the VRU |

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                   | unit's operating manner causing an automatic shutdown of the unit. This event is out of OXY's control yet OXY made every effort to control and minimize emissions as much as possible.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Corrective actions taken to eliminate the cause and reoccurrence of vent or flare | Oxy is limited in the corrective actions available to them to eliminate the cause and potential reoccurrence of VRU malfunctions as notwithstanding VRU design and operation, VRU's are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause VRU malfunctions to occur, thereby, triggering the unit to automatically shut down. Oxy continually strives to maintain and operate all its equipment in a manner consistent with good practices for minimizing emissions and reducing the number of emission events. Oxy has a strong and positive equipment preventative maintenance program in place. |

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ACKNOWLEDGMENTS

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ACKNOWLEDGMENTS

|                                     |                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> | I acknowledge that I am authorized to submit a <i>Venting and/or Flaring</i> (C-129) report on behalf of this operator and understand that this report can be a <b>complete</b> C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.                                                                                      |
| <input checked="" type="checkbox"/> | I acknowledge that upon submitting this application, I will be creating a new incident file (assigned to this operator) to track any C-129 forms, pursuant to 19.15.27.7 and 19.15.28.8 NMAC and understand that this submission meets the notification requirements of Paragraph (1) of Subsection G and F respectively. |
| <input checked="" type="checkbox"/> | I hereby certify the statements in this report are true and correct to the best of my knowledge and acknowledge that any false statement may be subject to civil and criminal penalties under the Oil and Gas Act.                                                                                                        |
| <input checked="" type="checkbox"/> | I acknowledge that the acceptance of any C-129 forms by the OCD does not relieve this operator of liability should their operations have failed to adequately investigate, report, and remediate contamination that poses a threat to groundwater, surface water, human health, or the environment.                       |
| <input checked="" type="checkbox"/> | I acknowledge that OCD acceptance of any C-129 forms does not relieve this operator of responsibility for compliance with any other applicable federal, state, or local laws and/or regulations.                                                                                                                          |

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CONDITIONS

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|                                                                    |                                                        |
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CONDITIONS

| Created By | Condition                                                                                                                                                                          | Condition Date |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| marialuna2 | 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. | 3/26/2024      |