



## Certificate of Analysis

Number: 6030-21120268-001A

Artesia Laboratory  
200 E Main St.  
Artesia, NM 88210  
Phone 575-746-3481

Matt Buckles  
Mack Energy  
11344 Lovington Hwy  
Artesia, NM 88210

Dec. 28, 2021

Station Name: Saskatoon Fed CTB  
Station Location: Mack Energy  
Sample Point: Meter Run  
Type of Sample: Spot-Cylinder  
Heat Trace Used: N/A  
Sampling Method: Fill and Purge  
Sampling Company: SPL  
Analyzed: 12/28/2021 09:53:05 by ERG

Sampled By: Donavan Miller  
Sample Of: Gas Spot  
Sample Date: 12/23/2021 10:42  
Sample Conditions: 27.1 psig, @ 80.1 °F Ambient: 64 °F  
Effective Date: 12/23/2021 10:42  
Method: GPA-2261M  
Cylinder No: 5030-02191  
Instrument: 6030\_GC6 (Inficon GC-3000 Micro)  
Last Inst. Cal.: 12/27/2021 0:00 AM

## Analytical Data

| Components       | Un-normalized<br>Mol % | Mol. %    | Wt. %   | GPM at<br>14.73 psia |                |
|------------------|------------------------|-----------|---------|----------------------|----------------|
| Hydrogen Sulfide | 0.000                  | 0.60000   | 0.829   |                      | GPM TOTAL C2+  |
| Nitrogen         | 5.107                  | 5.07773   | 5.767   |                      | GPM TOTAL C3+  |
| Methane          | 62.621                 | 62.26615  | 40.497  |                      | GPM TOTAL iC5+ |
| Carbon Dioxide   | 5.349                  | 5.31866   | 9.490   |                      |                |
| Ethane           | 14.748                 | 14.66463  | 17.877  | 3.938                |                |
| Propane          | 7.738                  | 7.69410   | 13.755  | 2.128                |                |
| Iso-butane       | 0.847                  | 0.84170   | 1.983   | 0.277                |                |
| n-Butane         | 1.966                  | 1.95515   | 4.607   | 0.619                |                |
| Iso-pentane      | 0.473                  | 0.47042   | 1.376   | 0.173                |                |
| n-Pentane        | 0.449                  | 0.44606   | 1.305   | 0.162                |                |
| Hexanes Plus     | 0.669                  | 0.66540   | 2.514   | 0.292                |                |
|                  | 99.967                 | 100.00000 | 100.000 | 7.589                |                |

| Calculated Physical Properties | Total  | C6+    |
|--------------------------------|--------|--------|
| Relative Density Real Gas      | 0.8550 | 3.2176 |
| Calculated Molecular Weight    | 24.67  | 93.19  |
| Compressibility Factor         | 0.9956 |        |

## GPA 2172 Calculation:

Calculated Gross BTU per ft<sup>3</sup> @ 14.73 psia & 60°F

|                                     |        |        |
|-------------------------------------|--------|--------|
| Real Gas Dry BTU                    | 1256   | 5141   |
| Water Sat. Gas Base BTU             | 1235   | 5052   |
| Ideal, Gross HV - Dry at 14.73 psia | 1250.7 | 5141.1 |
| Ideal, Gross HV - Wet               | 1228.9 | 5051.6 |

Comments: H2S Field Content .6 %

CC: Mack Brewer  
David Tena

Hydrocarbon Laboratory Manager

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

Saskatoon Federal Com Battery  
Facility ID: fAPP2211038673  
Location 33.011277 -104.0646602 960 FSL & 1675 FEL Sec. 18-T15S-R29E O

| Reference ID | Prod Date | Entry Date | Disposition | Product | UOM | Volume | Calculated<br>Vol*14.73/15.025 | Energy<br>Factor | Flow<br>Temp | Gas<br>Gravity | Base<br>Temp | Base Press | Flow<br>Press | Run Hours | Meter Begin | Meter End | Begin Date | End Date       | Last Updated   |               |
|--------------|-----------|------------|-------------|---------|-----|--------|--------------------------------|------------------|--------------|----------------|--------------|------------|---------------|-----------|-------------|-----------|------------|----------------|----------------|---------------|
|              | 8/30/2022 | 8/31/2022  | FLARE       | GAS     | MCF | 110    | 108                            |                  | 1            | 75             | 0.6          | 60         | 14.73         | 0         | 24          | 0         | 110        | 8/30/2022 0:00 | 8/30/2022 0:00 | IVANGUTIERREZ |

**District I**  
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**District II**  
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Phone:(575) 748-1283 Fax:(575) 748-9720  
**District III**  
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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 139743

DEFINITIONS

|                                                                        |                                                        |
|------------------------------------------------------------------------|--------------------------------------------------------|
| Operator:<br>MACK ENERGY CORP<br>P.O. Box 960<br>Artesia, NM 882110960 | OGRID:<br>13837                                        |
|                                                                        | Action Number:<br>139743                               |
|                                                                        | 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

Action 139743

**QUESTIONS**

|                                                                        |                                                        |
|------------------------------------------------------------------------|--------------------------------------------------------|
| Operator:<br>MACK ENERGY CORP<br>P.O. Box 960<br>Artesia, NM 882110960 | OGRID:<br>13837                                        |
|                                                                        | Action Number:<br>139743                               |
|                                                                        | Action Type:<br>[C-129] Venting and/or Flaring (C-129) |

**QUESTIONS**

|                                                                                                                                                                    |                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| <b>Prerequisites</b>                                                                                                                                               |                                                |
| 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                                                                                                                                                  | [fAPP2211038673] Saskatoon Federal Com Battery |

|                                                                                                                                                                                                                                                                                            |                                                   |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <b>Determination of Reporting Requirements</b>                                                                                                                                                                                                                                             |                                                   |
| 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                                                                                                                                                                                 | Yes                                               |
| 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 <b>ANY</b> 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                                | Not answered. |
| Additional details for Equipment Involved. Please specify | Not answered. |

|                                                                                                                               |               |
|-------------------------------------------------------------------------------------------------------------------------------|---------------|
| <b>Representative Compositional Analysis of Vented or Flared Natural Gas</b>                                                  |               |
| Please provide the mole percent for the percentage questions in this group.                                                   |               |
| Methane (CH4) percentage                                                                                                      | 62            |
| Nitrogen (N2) percentage, if greater than one percent                                                                         | 5             |
| Hydrogen Sulfide (H2S) PPM, rounded up                                                                                        | 1             |
| Carbon Dioxide (CO2) percentage, if greater than one percent                                                                  | 5             |
| 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. |

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QUESTIONS, Page 2

Action 139743

QUESTIONS (continued)

|                                                                        |                                                        |
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|                                                                        | Action Number:<br>139743                               |
|                                                                        | 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 | 08/30/2022 |
| Time vent or flare was discovered or commenced | 12:00 AM   |
| Time vent or flare was terminated              | 11:59 PM   |
| Cumulative hours during this event             | 24         |

| Measured or Estimated Volume of Vented or Flared Natural Gas              |                                                                                                                                       |
|---------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Natural Gas Vented (Mcf) Details                                          | Not answered.                                                                                                                         |
| Natural Gas Flared (Mcf) Details                                          | Cause: Midstream Emergency Maintenance   Pipeline (Any)   Natural Gas Flared   Released: 108 Mcf   Recovered: 0 Mcf   Lost: 108 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 this vent or flare a result of downstream activity            | Yes                                   |
| Was notification of downstream activity received by this operator | Yes                                   |
| Downstream OGRID that should have notified this operator          | [221115] FRONTIER FIELD SERVICES, LLC |
| Date notified of downstream activity requiring this vent or flare | 08/27/2022                            |
| Time notified of downstream activity requiring this vent or flare | 08:15 AM                              |

| 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                                                      | Downstream Failure                           |
| Steps taken to limit the duration and magnitude of vent or flare                                                                 | Stay in communication with Durango Midstream |
| Corrective actions taken to eliminate the cause and reoccurrence of vent or flare                                                | Beyond our control                           |

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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

Action 139743

CONDITIONS

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

CONDITIONS

| Created By | Condition                                                                                                                                                                          | Condition Date |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| dweaver    | 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. | 8/31/2022      |