



## Certificate of Analysis

Number: 5030-18110072-014A

**Midland Laboratory**  
 3312 Bankhead Highway  
 Midland, TX 79701  
 Phone 432-689-7252

Ethan McMahon  
 Comm Engineering  
 1319 West Pinhook Rd  
 Suite 401  
 Lafayette, LA 70503

Dec. 13, 2018

Station Name: SNAKE ST  
 Station Location: EDDY COUNTY NM  
 Sample Point: METER TUBE  
 Cylinder No: 5030-00375  
 Analyzed: 11/08/2018 21:33:14 by DS

Sampled By: JOSEPH WHITAKER  
 Sample Of: Gas Spot  
 Sample Date: 11/07/2018 11:55  
 Sample Conditions: 38.5 psig, @ 58.3 °F  
 Method: GPA 2286

## Analytical Data

| Components       | Mol. %  | Wt. %   | GPM at<br>14.65 psia |                |       |
|------------------|---------|---------|----------------------|----------------|-------|
| Hydrogen Sulfide | 0.000   | 0.000   |                      | GPM TOTAL C2+  | 3.276 |
| Nitrogen         | 1.085   | 1.593   |                      | GPM TOTAL C3+  | 1.557 |
| Carbon Dioxide   | 0.013   | 0.030   |                      | GPM TOTAL iC5+ | 0.411 |
| Methane          | 87.442  | 73.520  |                      |                |       |
| Ethane           | 6.443   | 10.154  | 1.719                |                |       |
| Propane          | 2.674   | 6.180   | 0.735                |                |       |
| Iso-butane       | 0.446   | 1.359   | 0.146                |                |       |
| n-Butane         | 0.842   | 2.565   | 0.265                |                |       |
| Iso-pentane      | 0.263   | 0.994   | 0.096                |                |       |
| n-Pentane        | 0.257   | 0.972   | 0.093                |                |       |
| Hexanes Plus     | 0.535   | 2.633   | 0.222                |                |       |
|                  | 100.000 | 100.000 | 3.276                |                |       |

| Calculated Physical Properties                                         | Total  | C6+    |
|------------------------------------------------------------------------|--------|--------|
| Relative Density Real Gas                                              | 0.6604 | 3.2275 |
| Calculated Molecular Weight                                            | 19.08  | 93.48  |
| Compressibility Factor                                                 | 0.9971 |        |
| <b>GPA 2172 Calculation:</b>                                           |        |        |
| <b>Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia &amp; 60°F</b> |        |        |
| Real Gas Dry BTU                                                       | 1154   | 5029   |
| Water Sat. Gas Base BTU                                                | 1134   | 4941   |

Hydrocarbon Laboratory Manager

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



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## Analytical Data

| Components       | Mol. %  | Wt. %   | GPM at<br>14.65 psia |                |
|------------------|---------|---------|----------------------|----------------|
| Hydrogen Sulfide | 0.000   | 0.000   |                      | GPM TOTAL C2+  |
| Nitrogen         | 1.085   | 1.593   |                      | GPM TOTAL C3+  |
| Methane          | 87.442  | 73.520  |                      | GPM TOTAL iC5+ |
| Carbon Dioxide   | 0.013   | 0.030   |                      |                |
| Ethane           | 6.443   | 10.154  | 1.719                |                |
| Propane          | 2.674   | 6.180   | 0.735                |                |
| Iso-Butane       | 0.446   | 1.359   | 0.146                |                |
| n-Butane         | 0.842   | 2.565   | 0.265                |                |
| Iso-Pentane      | 0.263   | 0.994   | 0.096                |                |
| n-Pentane        | 0.257   | 0.972   | 0.093                |                |
| Hexanes          | 0.211   | 0.989   | 0.090                |                |
| Heptanes Plus    | 0.324   | 1.644   | 0.132                |                |
|                  | 100.000 | 100.000 | 3.276                |                |

| Calculated Physical Properties | Total  | C7+    |
|--------------------------------|--------|--------|
| Relative Density Real Gas      | 0.6604 | 3.4253 |
| Calculated Molecular Weight    | 19.08  | 99.21  |
| Compressibility Factor         | 0.9971 |        |
| 26 # Gasoline                  | 2.2271 |        |

## GPA 2172 Calculation:

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

|                         |        |        |
|-------------------------|--------|--------|
| Real Gas Dry BTU        | 1153.9 | 5271.4 |
| Water Sat. Gas Base BTU | 1133.7 | 5179.2 |

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Analyzed: 11/08/2018 21:33:14 by DS

Sampled By: JOSEPH WHITAKER  
Sample Of: Gas Spot  
Sample Date: 11/07/2018 11:55  
Sample Conditions: 38.5 psig, @ 58.3 °F  
Method: GPA 2286

## Analytical Data

| Components       | Mol. %  | Wt. %   | GPM at<br>14.65 psia |                     |
|------------------|---------|---------|----------------------|---------------------|
| Hydrogen Sulfide | 0.000   | 0.000   |                      | GPM TOTAL C2+ 3.276 |
| Nitrogen         | 1.085   | 1.593   |                      |                     |
| Carbon Dioxide   | 0.013   | 0.030   |                      |                     |
| Methane          | 87.442  | 73.520  |                      |                     |
| Ethane           | 6.443   | 10.154  | 1.719                |                     |
| Propane          | 2.674   | 6.180   | 0.735                |                     |
| Iso-Butane       | 0.446   | 1.359   | 0.146                |                     |
| n-Butane         | 0.842   | 2.565   | 0.265                |                     |
| Iso-Pentane      | 0.263   | 0.994   | 0.096                |                     |
| n-Pentane        | 0.257   | 0.972   | 0.093                |                     |
| i-Hexanes        | 0.126   | 0.585   | 0.053                |                     |
| n-Hexane         | 0.085   | 0.404   | 0.037                |                     |
| Benzene          | 0.008   | 0.030   | 0.002                |                     |
| Cyclohexane      | 0.046   | 0.210   | 0.016                |                     |
| i-Heptanes       | 0.094   | 0.468   | 0.039                |                     |
| n-Heptane        | 0.031   | 0.165   | 0.015                |                     |
| Toluene          | 0.009   | 0.044   | 0.003                |                     |
| i-Octanes        | 0.079   | 0.436   | 0.035                |                     |
| n-Octane         | 0.011   | 0.064   | 0.005                |                     |
| Ethylbenzene     | 0.001   | 0.005   | 0.000                |                     |
| Xylenes          | 0.005   | 0.027   | 0.002                |                     |
| i-Nonanes        | 0.016   | 0.075   | 0.006                |                     |
| n-Nonane         | 0.004   | 0.022   | 0.002                |                     |
| Decane Plus      | 0.020   | 0.098   | 0.007                |                     |
|                  | 100.000 | 100.000 | 3.276                |                     |

|                                                                        |              |             |
|------------------------------------------------------------------------|--------------|-------------|
| <b>Calculated Physical Properties</b>                                  | <b>Total</b> | <b>C10+</b> |
| Calculated Molecular Weight                                            | 19.08        | 134.41      |
| <b>GPA 2172 Calculation:</b>                                           |              |             |
| <b>Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia &amp; 60°F</b> |              |             |
| Real Gas Dry BTU                                                       | 1153.9       | 6996.5      |
| Water Sat. Gas Base BTU                                                | 1133.7       | 6874.1      |
| Relative Density Real Gas                                              | 0.6604       | 4.6312      |
| Compressibility Factor                                                 | 0.9971       |             |

Hydrocarbon Laboratory Manager

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

**New Mexico OCD C-129**

**Calculations or Specific Justification for Volumes**

- **Calculations**  
No calculations of volume of vent/flare necessary. Volumes are metered.
- **Specific Justification for Volumes**  
Metered volumes that were previously sold via pipeline. Must flare gas due to sales pipeline being shut-in.

**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 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 58575

**QUESTIONS**

|                                                                                  |                                                        |
|----------------------------------------------------------------------------------|--------------------------------------------------------|
| Operator:<br>LEGACY RESERVES OPERATING, LP<br>15 Smith Road<br>Midland, TX 79705 | OGRID:<br>240974                                       |
|                                                                                  | Action Number:<br>58575                                |
|                                                                                  | 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 | [fAPP2124631913] Leo 3 Fed |

**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                                                                                                                                                                  | Yes                                               |
| 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                                                                                                      | 87            |
| 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 | 10/27/2021 |
| Time venting and/or flaring was discovered or commenced | 12:00 AM   |
| Time venting and/or flaring was terminated              | 12:00 AM   |
| 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   Separator   Natural Gas Flared   Released: 100 Mcf   Recovered: 0 Mcf   Lost: 100 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      | Yes                               |
| Was notification of downstream activity received by you or your operator   | Yes                               |
| Downstream OGRID that should have notified you or your operator            | [36785] DCP OPERATING COMPANY, LP |
| Date notified of downstream activity requiring this venting and/or flaring | 10/27/2021                        |
| Time notified of downstream activity requiring this venting and/or flaring | 12:00 AM                          |

**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                                                    | Sales Pipeline shut in.                                         |
| Steps taken to limit the duration and magnitude of venting and/or flaring                                                      | Communicate with sales pipeline for anticipated date of return. |
| Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring                                     | Communicate with sales pipeline for anticipated date of return. |

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CONDITIONS  
  
Action 58575

CONDITIONS

|                                                                                  |                                                        |
|----------------------------------------------------------------------------------|--------------------------------------------------------|
| Operator:<br>LEGACY RESERVES OPERATING, LP<br>15 Smith Road<br>Midland, TX 79705 | OGRID:<br>240974                                       |
|                                                                                  | Action Number:<br>58575                                |
|                                                                                  | Action Type:<br>[C-129] Venting and/or Flaring (C-129) |

CONDITIONS

| Created By | Condition                                                                                                                                                                          | Condition Date |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| reyesm01   | 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. | 10/29/2021     |