



Certificate of Analysis

Number: 5030-18110072-011A

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: LEA UNIT CTB/TPG
 Station Location: LEA COUNTY NM
 Sample Point: HEATER TREATER
 Analyzed: 11/08/2018 20:32:52 by Administrator

Sampled By: JOSEPH WHITAKER
 Sample Of: Gas Spot
 Sample Date: 11/07/2018 07:50
 Sample Conditions: 35 psig, @ 111 °F
 Method: GPA 2286

Analytical Data

| Components | Mol. % | Wt. % | GPM at 14.65 psia | | |
|------------------|---------|---------|----------------------|----------------|--------|
| Hydrogen Sulfide | 0.010 | 0.013 | | GPM TOTAL C2+ | 10.094 |
| Nitrogen | 2.745 | 2.844 | | GPM TOTAL C3+ | 6.044 |
| Carbon Dioxide | 3.903 | 6.352 | | GPM TOTAL iC5+ | 1.133 |
| Methane | 58.216 | 34.536 | | | |
| Ethane | 15.145 | 16.841 | 4.050 | | |
| Propane | 11.467 | 18.699 | 3.159 | | |
| Iso-butane | 1.474 | 3.168 | 0.482 | | |
| n-Butane | 4.028 | 8.658 | 1.270 | | |
| Iso-pentane | 0.867 | 2.313 | 0.317 | | |
| n-Pentane | 0.904 | 2.412 | 0.328 | | |
| Hexanes Plus | 1.241 | 4.164 | 0.488 | | |
| | 100.000 | 100.000 | 10.094 | | |

| Calculated Physical Properties | Total | C6+ |
|--|--------|--------|
| Relative Density Real Gas | 0.9383 | 3.1036 |
| Calculated Molecular Weight | 27.04 | 89.89 |
| Compressibility Factor | 0.9943 | |
| GPA 2172 Calculation: | | |
| Calculated Gross BTU per ft³ @ 14.65 psia & 60°F | | |
| Real Gas Dry BTU | 1458 | 4790 |
| Water Sat. Gas Base BTU | 1433 | 4707 |

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 14.65 psia | |
|------------------|---------|---------|----------------------|----------------|
| Hydrogen Sulfide | 0.010 | 0.013 | | GPM TOTAL C2+ |
| Nitrogen | 2.745 | 2.844 | | GPM TOTAL C3+ |
| Methane | 58.216 | 34.536 | | GPM TOTAL iC5+ |
| Carbon Dioxide | 3.903 | 6.352 | | |
| Ethane | 15.145 | 16.841 | 4.050 | |
| Propane | 11.467 | 18.699 | 3.159 | |
| Iso-Butane | 1.474 | 3.168 | 0.482 | |
| n-Butane | 4.028 | 8.658 | 1.270 | |
| Iso-Pentane | 0.867 | 2.313 | 0.317 | |
| n-Pentane | 0.904 | 2.412 | 0.328 | |
| Hexanes | 0.515 | 1.618 | 0.208 | |
| Heptanes Plus | 0.726 | 2.546 | 0.280 | |
| | 100.000 | 100.000 | 10.094 | |

| Calculated Physical Properties | Total | C7+ |
|--|--------|--------|
| Relative Density Real Gas | 0.9383 | 3.2292 |
| Calculated Molecular Weight | 27.04 | 93.53 |
| Compressibility Factor | 0.9943 | |
| 26 # Gasoline | 6.0734 | |
| GPA 2172 Calculation: | | |
| Calculated Gross BTU per ft³ @ 14.65 psia & 60°F | | |
| Real Gas Dry BTU | 1458.3 | 4890.1 |
| Water Sat. Gas Base BTU | 1432.7 | 4804.6 |

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Sampled By: JOSEPH WHITAKER
 Sample Of: Gas Spot
 Sample Date: 11/07/2018 07:50
 Sample Conditions: 35 psig, @ 111 °F
 Method: GPA 2286

Analytical Data

| Components | Mol. % | Wt. % | GPM at 14.65 psia | |
|------------------|---------|---------|----------------------|---------------|
| Hydrogen Sulfide | 0.010 | 0.013 | | GPM TOTAL C2+ |
| Nitrogen | 2.745 | 2.844 | | 10.094 |
| Carbon Dioxide | 3.903 | 6.352 | | |
| Methane | 58.216 | 34.536 | | |
| Ethane | 15.145 | 16.841 | 4.050 | |
| Propane | 11.467 | 18.699 | 3.159 | |
| Iso-Butane | 1.474 | 3.168 | 0.482 | |
| n-Butane | 4.028 | 8.658 | 1.270 | |
| Iso-Pentane | 0.867 | 2.313 | 0.317 | |
| n-Pentane | 0.904 | 2.412 | 0.328 | |
| i-Hexanes | 0.333 | 1.036 | 0.133 | |
| n-Hexane | 0.182 | 0.582 | 0.075 | |
| Benzene | 0.098 | 0.282 | 0.028 | |
| Cyclohexane | 0.120 | 0.371 | 0.041 | |
| i-Heptanes | 0.232 | 0.782 | 0.091 | |
| n-Heptane | 0.041 | 0.152 | 0.019 | |
| Toluene | 0.050 | 0.169 | 0.017 | |
| i-Octanes | 0.123 | 0.481 | 0.054 | |
| n-Octane | 0.011 | 0.049 | 0.006 | |
| Ethylbenzene | 0.005 | 0.017 | 0.002 | |
| Xylenes | 0.012 | 0.039 | 0.004 | |
| i-Nonanes | 0.014 | 0.092 | 0.007 | |
| n-Nonane | 0.007 | 0.031 | 0.004 | |
| Decane Plus | 0.013 | 0.081 | 0.007 | |
| | 100.000 | 100.000 | 10.094 | |

| Calculated Physical Properties | Total | C10+ |
|--|--------|--------|
| Calculated Molecular Weight | 27.04 | 128.37 |
| GPA 2172 Calculation: | | |
| Calculated Gross BTU per ft³ @ 14.65 psia & 60°F | | |
| Real Gas Dry BTU | 1458.3 | 6644.4 |
| Water Sat. Gas Base BTU | 1432.7 | 6528.1 |
| Relative Density Real Gas | 0.9383 | 4.4420 |
| Compressibility Factor | 0.9943 | |

Hydrocarbon Laboratory Manager

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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 31737

QUESTIONS

| | |
|--|--|
| Operator: LEGACY RESERVES OPERATING, LP 15 Smith Road Midland, TX 79705 | OGRID: 240974 |
| | Action Number: 31737 |
| | Action Type: [C-129] Venting and/or Flaring (C-129) |

QUESTIONS**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 or flaring caused by an emergency or malfunction | No |
| Did or will this venting 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 notification of a major venting or flaring | Yes, major venting or flaring of natural gas. |
| The operator shall file a form C-141 instead of a form C-129 for a release that includes liquid during venting or flaring that is or may be a major or minor release under 19.13.29.7 NMAC | |
| Was there or will there be at least 50 MCF of natural gas vented or flared during this event | Yes |
| Did this venting 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 |

Unregistered Facility Site

Please provide the facility details, if the venting or flaring occurred or is occurring at a facility that does not have an Facility ID (##) yet.

| | |
|-----------------------|---------------|
| Facility or Site Name | Not answered. |
| Facility Type | Not answered. |

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 | 58 |
| Nitrogen (N2) percentage, if greater than one percent | 3 |
| Hydrogen Sulfide (H2S) PPM, rounded up | 90 |
| Carbon Dioxide (CO2) percentage, if greater than one percent | 4 |
| 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 or flaring was discovered or commenced | 06/13/2021 |
| Time venting or flaring was discovered or commenced | 01:00 PM |
| Is the venting or flaring event complete | No |
| Date venting or flaring was terminated | Not answered. |
| Time venting or flaring was terminated | Not answered. |
| Total duration of venting or flaring in hours, if venting or flaring has terminated | Not answered. |
| Longest duration of cumulative hours within any 24-hour period 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 Spilled: 3,500 Mcf Recovered: 0 Mcf Lost: 3,500 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 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 or flaring a result of downstream activity | Not answered. |
| Date notified of downstream activity requiring this venting or flaring | Not answered. |
| Time notified of downstream activity requiring this venting 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 | Sales pipeline shut-in |
| Steps taken to limit the duration and magnitude of venting or flaring | Communicate with sales pipeline for anticipated date of return service. |
| Corrective actions taken to eliminate the cause and reoccurrence of venting or flaring | Communicate with sales pipeline for anticipated date of return service. |

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CONDITIONS

Action 31737

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| Operator: LEGACY RESERVES OPERATING, LP 15 Smith Road Midland, TX 79705 | OGRID: 240974 |
| | Action Number: 31737 |
| | Action Type: [C-129] Venting and/or Flaring (C-129) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------|--|----------------|
| system | If the information provided in this report requires an amendment, submit a [C-129] Request to Amend Venting and/or Flaring Incident, utilizing your incident number from this event. | 6/14/2021 |