



Certificate of Analysis

Number: 6030-22090243-002A

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

Paul Martinez
 Earthstone
 801 Cherry St, Suite 1200
 Fort Worth, TX 76102

Oct. 21, 2022

| | | | |
|-------------------|----------------------------|--------------------|-----------------------------|
| Station Name: | Cletus 28-21 Fed Com 2H | Sampled By: | Arnulfo Herrera |
| Station Location: | Chisholm | Sample Of: | Gas Spot |
| Sample Point: | Meter Run | Sample Date: | 09/16/2022 |
| Type of Sample: | Spot-Cylinder | Sample Conditions: | 123 psig |
| Heat Trace Used: | N/A | Effective Date: | 09/16/2022 |
| Sampling Method: | Fill and Purge | Method: | GPA 2286 |
| Sampling Company: | SPL | Cylinder No.: | 5030-02380 |
| Analyzed: | 09/23/2022 08:48:49 by KNF | Instrument: | 6030_GC2 (Agilent GC-7890B) |
| | | Last Inst. Cal.: | 09/12/2022 12:00 PM |

Analytical Data

| Components | Un-normalized Mol % | Mol. % | Wt. % | GPM at 14.73 psia | | |
|----------------|---------------------|-----------|---------|-------------------|----------------|-------|
| Nitrogen | 0.947 | 0.95000 | 1.168 | | GPM TOTAL C2+ | 7.293 |
| Methane | 73.520 | 73.78800 | 51.945 | | GPM TOTAL C3+ | 3.641 |
| Carbon Dioxide | 0.155 | 0.15600 | 0.301 | | GPM TOTAL iC5+ | 0.844 |
| Ethane | 13.557 | 13.60600 | 17.953 | 3.652 | | |
| Propane | 6.597 | 6.62100 | 12.812 | 1.831 | | |
| Iso-butane | 0.899 | 0.90200 | 2.301 | 0.297 | | |
| n-Butane | 2.106 | 2.11400 | 5.392 | 0.669 | | |
| Iso-pentane | 0.471 | 0.47300 | 1.498 | 0.173 | | |
| n-Pentane | 0.553 | 0.55500 | 1.757 | 0.201 | | |
| Hexanes Plus | 0.832 | 0.83500 | 4.873 | 0.470 | | |
| | 99.637 | 100.00000 | 100.000 | 7.293 | | |

| | | |
|---|--------------|------------|
| Calculated Physical Properties | Total | C6+ |
| Relative Density Real Gas | 0.7894 | 4.5505 |
| Calculated Molecular Weight | 22.79 | 131.79 |
| Compressibility Factor | 0.9959 | |
| GPA 2172 Calculation: | | |
| Calculated Gross BTU per ft³ @ 14.73 psia & 60°F | | |
| Real Gas Dry BTU | 1360 | 7142 |
| Water Sat. Gas Base BTU | 1337 | 7018 |
| Ideal, Gross HV - Dry at 14.73 psia | 1354.7 | 7142.4 |
| Ideal, Gross HV - Wet | 1331.2 | 0.000 |

Data reviewed by: Krystle Fitzwater, 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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|-------------------|-------------------------|--------------------|----------------------------|
| Station Name: | Cletus 28-21 Fed Com 2H | Sampled By: | Arnulfo Herrera |
| Station Location: | Chisholm | Sample Of: | Gas Spot |
| Sample Point: | Meter Run | Sample Date: | 09/16/2022 |
| Type of Sample: | Spot-Cylinder | Sample Conditions: | 123 psig |
| Heat Trace Used: | N/A | Method: | GPA 2286 |
| Sampling Method: | Fill and Purge | Cylinder No: | 5030-02380 |
| Sampling Company: | SPL | Analyzed: | 09/23/2022 08:47:20 by KNF |

Analytical Data

| Components | Mol. % | Wt. % | GPM at 14.73 psia |
|------------------|----------------|----------------|----------------------|
| Hydrogen Sulfide | 0.000 | 0.000 | |
| Nitrogen | 0.950 | 1.168 | |
| Methane | 73.788 | 51.945 | |
| Carbon Dioxide | 0.156 | 0.301 | |
| Ethane | 13.606 | 17.953 | 3.652 |
| Propane | 6.621 | 12.812 | 1.831 |
| Iso-Butane | 0.902 | 2.301 | 0.297 |
| n-Butane | 2.114 | 5.392 | 0.669 |
| Iso-Pentane | 0.473 | 1.498 | 0.173 |
| n-Pentane | 0.555 | 1.757 | 0.201 |
| i-Hexanes | 0.113 | 0.416 | 0.045 |
| n-Hexane | 0.078 | 0.295 | 0.032 |
| Benzene | 0.007 | 0.021 | 0.002 |
| Cyclohexane | 0.042 | 0.156 | 0.014 |
| i-Heptanes | 0.094 | 0.380 | 0.038 |
| n-Heptane | 0.027 | 0.117 | 0.012 |
| Toluene | 0.009 | 0.036 | 0.003 |
| i-Octanes | 0.070 | 0.335 | 0.032 |
| n-Octane | 0.007 | 0.034 | 0.003 |
| Ethylbenzene | 0.000 | 0.003 | 0.000 |
| Xylenes | 0.005 | 0.032 | 0.002 |
| i-Nonanes | 0.014 | 0.082 | 0.007 |
| n-Nonane | 0.003 | 0.021 | 0.002 |
| Decanes Plus | 0.366 | 2.945 | 0.278 |
| | <u>100.000</u> | <u>100.000</u> | <u>7.293</u> |



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| Sample Point: | Meter Run | Sample Date: | 09/16/2022 |
| Type of Sample: | Spot-Cylinder | Sample Conditions: | 123 psig |
| Heat Trace Used: | N/A | Method: | GPA 2286 |
| Sampling Method: | Fill and Purge | Cylinder No: | 5030-02380 |
| Sampling Company: | SPL | Analyzed: | 09/23/2022 08:47:20 by KNF |

| Calculated Physical Properties | Total | C10+ |
|--|--------|--------|
| Calculated Molecular Weight | 22.79 | 182.02 |
| GPA 2172 Calculation: | | |
| Calculated Gross BTU per ft³ @ 14.73 psia & 60°F | | |
| Real Gas Dry BTU | 1360.3 | 9910.6 |
| Water Sat. Gas Base BTU | 1336.6 | 9698.6 |
| Relative Density Real Gas | 0.7894 | 6.2848 |
| Compressibility Factor | 0.9959 | |
| Ideal, Gross HV - Wet | 1331.2 | |
| Ideal, Gross HV - Dry at 14.73 psia | 1354.7 | |
| Net BTU Dry Gas - real gas | 1237 | |
| Net BTU Wet Gas - real gas | 1215 | |

Data reviewed by: Krystle Fitzwater, Laboratory Manager

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

Calculations for the total Mcf flared
End Meter Volume – the Begin Meter Volume.

***Composition for the gas has been entered into the question portion of the C-129.
If further back up is needed please let us know and will provide requested data.

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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

DEFINITIONS

Action 185292

DEFINITIONS

| | |
|--|---|
| Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380 | OGRID: 331165 |
| | Action Number: 185292 |
| | Action Type: [C-129] Amend Venting and/or Flaring (C-129A) |

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:

- this application's operator, hereinafter "this operator";
- venting and/or flaring, hereinafter "vent or flare";
- any notification or report(s) of the C-129 form family, hereinafter "any C-129 forms";
- the statements in (and/or attached to) this, hereinafter "the statements in this";
- and the past tense will be used in lieu of mixed past/present tense questions and statements.

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QUESTIONS

Action 185292

QUESTIONS

| | |
|--|---|
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| | Action Number: 185292 |
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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 Operator | [331165] Earthstone Operating, LLC |
| Incident Type | Flare |
| Incident Status | Closure Not Approved |
| Incident Well | Unavailable. |
| Incident Facility | [fAPP2231963069] Cletus 28-21 Fed Com Facility |

Only valid Vent, Flare or Vent with Flaring incidents (selected above in the Application Details section) that are assigned to your current operator can be amended with this C-129A application.

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 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, major 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 within 300 feet from an occupied permanent residence, school, hospital, institution or church in existence | No |

Equipment Involved

| | |
|---|------------------------|
| Primary Equipment Involved | Gas Compressor Station |
| 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 | 74 |
| 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. |

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QUESTIONS (continued)

| | |
|--|---|
| Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380 | OGRID: 331165 |
| | Action Number: 185292 |
| | Action Type: [C-129] Amend Venting and/or Flaring (C-129A) |

QUESTIONS

| Date(s) and Time(s) | |
|--|------------|
| Date vent or flare was discovered or commenced | 02/02/2023 |
| 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 Gas Compressor Station Natural Gas Flared Released: 1,501 Mcf Recovered: 0 Mcf Lost: 1,501 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 | No |
| Downstream OGRID that should have notified this operator | [371960] LUCID ENERGY DELAWARE, LLC |
| Date notified of downstream activity requiring this vent or flare | |
| 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 | PM at midstream compressor station |
| Steps taken to limit the duration and magnitude of vent or flare | Standard PM. Worked with midstream to coordinate service time and minimize downtime. |
| Corrective actions taken to eliminate the cause and reoccurrence of vent or flare | No way to avoid periodic downtime for maintenance / repairs to address unforeseen conditions. |

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ACKNOWLEDGMENTS
 Action 185292

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| | Action Number: 185292 |
| | Action Type: [C-129] Amend Venting and/or Flaring (C-129A) |

ACKNOWLEDGMENTS

| | |
|-------------------------------------|---|
| <input checked="" type="checkbox"/> | I acknowledge that with this application I will be amending an existing incident file (assigned to this operator) for a vent or flare event, pursuant to 19.15.27 and 19.15.28 NMAC. |
| <input checked="" type="checkbox"/> | I acknowledge that amending an incident file does not replace original submitted application(s) or information and understand that any C-129 forms submitted to the OCD will be logged and stored as public record. |
| <input checked="" type="checkbox"/> | I hereby certify the statements in this amending 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 185292

CONDITIONS

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| | Action Number: 185292 |
| | Action Type: [C-129] Amend Venting and/or Flaring (C-129A) |

CONDITIONS

| Created By | Condition | Condition Date |
|------------|--|----------------|
| kmcbride | If the information provided in this report requires further amendment(s), submit a [C-129] Amend Venting and/or Flaring Incident (C-129A), utilizing your incident number from this event. | 2/13/2023 |