



Certificate of Analysis

Number: 6030-24080540-001A

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

Aug. 23, 2024

Station Name:	Cottonwood 29-32 Fed Com 2BS 2H	Sampled By:	Mike Montgomery
Station Number:	29410130	Sample Of:	Gas Spot
Station Location:	Chisholm	Sample Date:	08/19/2024 01:15
Sample Point:	Meter Run	Sample Conditions:	158.7 psig, @ 100.4 °F Ambient: 102 °F
Type of Sample:	Spot-Cylinder	Effective Date:	08/19/2024 01:15
Heat Trace Used:	N/A	Flow Rate:	830 MSCFD
Sampling Method:	Fill and Purge	Method:	GPA-2261M
Sampling Company:	SPL	Cylinder No:	3040-02784
Analyzed:	08/23/2024 11:21:41 by CDW	Instrument:	70104251 (Inficon GC-MicroFusion)
		Last Inst. Cal.:	08/19/2024 0:00 AM

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia		
Hydrogen Sulfide	0.0000	0.0040	0.0065		GPM TOTAL C2+	5.428
Nitrogen	1.0317	1.0312	1.3737		GPM TOTAL C3+	2.543
Methane	79.7301	79.6901	60.7958		GPM TOTAL iC5+	0.688
Carbon Dioxide	0.4461	0.4459	0.9332			
Ethane	10.7573	10.7519	15.3745	2.885		
Propane	4.4010	4.3988	9.2242	1.216		
Iso-butane	0.6148	0.6145	1.6985	0.202		
n-Butane	1.3814	1.3807	3.8163	0.437		
Iso-pentane	0.3214	0.3212	1.1021	0.118		
n-Pentane	0.3593	0.3591	1.2321	0.131		
Hexanes Plus	1.0031	1.0026	4.4431	0.439		
	<u>100.0462</u>	<u>100.0000</u>	<u>100.0000</u>	<u>5.428</u>		

Calculated Physical Properties	Total	C6+
Relative Density Real Gas	0.7284	3.2176
Calculated Molecular Weight	21.03	93.19
Compressibility Factor	0.9964	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.73 psia & 60°F

Real Gas Dry BTU	1257	5141
Water Sat. Gas Base BTU	1236	5052
Ideal, Gross HV - Dry at 14.73 psia	1252.4	5141.1
Ideal, Gross HV - Wet	1230.6	5051.6

Comments: H2S Field Content 40 ppm

Hydrocarbon Laboratory Manager

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

PERMIAN

RESOURCES

Permian Resources meters all flared volumes, and volumes reported on C-129's in connection with flaring events are based on the available meter readings. While Permian Resources reports metered volumes on C-129 submissions, PR reviews the metered data for accuracy, reconciles any discovered discrepancies, and, where appropriate, submits amended C-129 reported volumes post-reconciliation to ensure accurate reporting.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

DEFINITIONS

Action 574875

DEFINITIONS

Operator: Earthstone Operating, LLC 300 N. Marienfeld St Ste 1000 Midland, TX 79701	OGRID: 331165
	Action Number: 574875
	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 574875

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QUESTIONS

Prerequisites	
<i>Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.</i>	
Incident ID (n#)	Unavailable.
Incident Name	Unavailable.
Incident Type	Flare
Incident Status	Unavailable.
Incident Facility	[fAPP2124450386] COTTONWOOD 29-32 FED COM WEST BATTERY
<i>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.</i>	

Determination of Reporting Requirements	
<i>Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.</i>	
Was this vent or flare caused by an emergency or malfunction	No
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, answer to "eight hours or more" suggests this is at least a minor event.
<i>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.</i>	
Was there at least 50 MCF of natural gas vented and/or flared during this event	No
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	Not answered.
Additional details for Equipment Involved. Please specify	Not answered.

Representative Compositional Analysis of Vented or Flared Natural Gas	
<i>Please provide the mole percent for the percentage questions in this group.</i>	
Methane (CH4) percentage	81
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
<i>If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.</i>	
Methane (CH4) percentage quality requirement	0
Nitrogen (N2) percentage quality requirement	0
Hydrogen Sulfide (H2S) PPM quality requirement	0
Carbon Dioxide (CO2) percentage quality requirement	0
Oxygen (O2) percentage quality requirement	0

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QUESTIONS, Page 2

Action 574875

QUESTIONS (continued)

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QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	03/11/2026
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	<i>Not answered.</i>
Natural Gas Flared (Mcf) Details	Cause: Equipment Failure Tank (Any) Natural Gas Flared Released: 0 Mcf Recovered: 0 Mcf Lost: 0 Mcf.
Other Released Details	<i>Not answered.</i>
Additional details for Measured or Estimated Volume(s). Please specify	<i>Not answered.</i>
Is this a gas only submission (i.e. only significant Mcf values reported)	More info needed to determine if this will be treated as 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	No
Downstream OGRID that should have notified this operator	0
Date notified of downstream activity requiring this vent or flare	
Time notified of downstream activity requiring this vent or flare	<i>Not answered.</i>

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	VRU issues
Steps taken to limit the duration and magnitude of vent or flare	Open valves to divert gas to a second midstream company to relieve pressure off the line
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Clear consistent communication with midstream provider

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ACKNOWLEDGMENTS

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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

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CONDITIONS

Created By	Condition	Condition Date
jdoolingpr	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.	4/13/2026