



Certificate of Analysis

Number: 6030-22080419-001A

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. 30, 2022

Station Name: Ram 2-11 2BS Fed Com 9H
Station Number: 89410038
Station Location: Chisholm
Sample Point: Meter Run
Type of Sample: Spot-Cylinder
Heat Trace Used: N/A
Sampling Method: Fill and Purge
Sampling Company: SPL
Analyzed: 08/30/2022 13:36:50 by KNF

Sampled By: Arnulfo Herrera
Sample Of: Gas Spot
Sample Date: 08/26/2022
Sample Conditions: 116 psig, @ 107 °F Ambient: 81 °F
Effective Date: 08/26/2022
Method: GPA 2286
Cylinder No: 5030-01452
Instrument: 6030_GC2 (Agilent GC-7890B)
Last Inst. Cal.: 08/29/2022 14:11 PM

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia		
Hydrogen Sulfide	0.000	11.00000	14.839		GPM TOTAL C2+	7.340
Nitrogen	3.103	2.74800	3.047		GPM TOTAL C3+	3.865
Methane	67.037	59.36800	37.698		GPM TOTAL iC5+	0.740
Carbon Dioxide	1.343	1.18900	2.071			
Ethane	14.604	12.93300	15.393	3.475		
Propane	8.637	7.64900	13.350	2.117		
Iso-butane	1.034	0.91600	2.107	0.301		
n-Butane	2.519	2.23100	5.133	0.707		
Iso-pentane	0.617	0.54600	1.559	0.200		
n-Pentane	0.586	0.51900	1.482	0.189		
Hexanes Plus	1.017	0.90100	3.321	0.351		
	100.497	100.00000	100.000	7.340		

Calculated Physical Properties

Relative Density Real Gas	Total	C6+
Calculated Molecular Weight	0.8763	3.2125
Compressibility Factor	25.26	93.04
	0.9950	

GPA 2172 Calculation:

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

Real Gas Dry BTU	1290	4906
Water Sat. Gas Base BTU	1267	4821
Ideal, Gross HV - Dry at 14.73 psia	1283.3	4906.1
Ideal, Gross HV - Wet	1261.0	0.000

Comments: H2S Field Content 11 %

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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Sampled By: Arnulfo Herrera
Sample Of: Gas Spot
Sample Date: 08/26/2022
Sample Conditions: 116 psig, @ 107 °F
Method: GPA 2286
Cylinder No: 5030-01452
Analyzed: 08/30/2022 13:35:06 by KNF

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.73 psia
Hydrogen Sulfide	11.000	14.839	
Nitrogen	2.748	3.047	
Methane	59.368	37.698	
Carbon Dioxide	1.189	2.071	
Ethane	12.933	15.393	3.475
Propane	7.649	13.350	2.117
Iso-Butane	0.916	2.107	0.301
n-Butane	2.231	5.133	0.707
Iso-Pentane	0.546	1.559	0.200
n-Pentane	0.519	1.482	0.189
i-Hexanes	0.174	0.579	0.069
n-Hexane	0.079	0.273	0.033
Benzene	0.100	0.322	0.029
Cyclohexane	0.084	0.283	0.029
i-Heptanes	0.126	0.453	0.050
n-Heptane	0.023	0.089	0.010
Toluene	0.084	0.309	0.028
i-Octanes	0.091	0.362	0.039
n-Octane	0.010	0.047	0.005
Ethylbenzene	0.027	0.114	0.010
Xylenes	0.031	0.132	0.012
i-Nonanes	0.037	0.174	0.018
n-Nonane	0.012	0.059	0.007
Decanes Plus	0.023	0.125	0.012
	100.000	100.000	7.340



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Sampling Method: Fill and Purge
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Sampled By: Arnulfo Herrera
Sample Of: Gas Spot
Sample Date: 08/26/2022
Sample Conditions: 116 psig, @ 107 °F
Method: GPA 2286
Cylinder No: 5030-01452
Analyzed: 08/30/2022 13:35:06 by KNF

Calculated Physical Properties	Total	C10+
Calculated Molecular Weight	25.26	140.35
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.73 psia & 60°F		
Real Gas Dry BTU	1289.8	7482.9
Water Sat. Gas Base BTU	1267.3	7316.0
Relative Density Real Gas	0.8763	4.8458
Compressibility Factor	0.9950	
Ideal, Gross HV - Wet	1261.0	
Ideal, Gross HV - Dry at 14.73 psia	1283.3	
Net BTU Dry Gas - real gas	1175	
Net BTU Wet Gas - real gas	1154	
Comments: H2S Field Content 11 %		

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

DEFINITIONS

Action 160746

DEFINITIONS

Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	OGRID: 331165
	Action Number: 160746
	Action Type: [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: • 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 160746

QUESTIONS

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	Action Number: 160746
	Action Type: [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	Unavailable.
Incident Facility	[fAPP2231962715] Ram 2-11 Fed Com Facility

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	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, 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 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	Gas purchaser shut in for maintenance.

Representative Compositional Analysis of Vented or Flared Natural Gas

Please provide the mole percent for the percentage questions in this group.

Methane (CH4) percentage	65
Nitrogen (N2) percentage, if greater than one percent	3
Hydrogen Sulfide (H2S) PPM, rounded up	1,000
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.

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QUESTIONS, Page 2

Action 160746

QUESTIONS (continued)

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	Action Number: 160746
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	11/14/2022
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 Scheduled Maintenance Gas Compressor Station Natural Gas Flared Released: 159 Mcf Recovered: 0 Mcf Lost: 159 Mcf.
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Metered at flare
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	[36785] DCP OPERATING COMPANY, LP
Date notified of downstream activity requiring this vent or flare	11/01/2022
Time notified of downstream activity requiring this vent or flare	09:00 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.	False
Please explain reason for why this event was beyond this operator's control	Steps were not taken to shut-in wells prior to the event due to miscommunication.
Steps taken to limit the duration and magnitude of vent or flare	Management took immediate action and began shutting in the wells when issue was identified.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Wells were shut-in to prevent additional flaring. Management processes being reviewed and implemented to prevent in the future.

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ACKNOWLEDGMENTS

Action 160746

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	Action Number: 160746
	Action Type: [C-129] Venting and/or Flaring (C-129)

ACKNOWLEDGMENTS

☒	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 complete C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
☒	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.
☒	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.
☒	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.
☒	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 160746

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	Action Number: 160746
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CONDITIONS

Created By	Condition	Condition Date
kmcbride	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.	11/22/2022