



Certificate of Analysis

Number: 6030-22090419-001A

Artesia Laboratory

200 E Main St.

Artesia, NM 88210

Phone 575-746-3481

Jarrett Webb
Longfellow Energy
8115 Preston Rd
Suite 800
Dallas, TX 75225

Sep. 28, 2022

Station Name: Santa 20 CTB Production

Station Number: 32613007

Station Location: Longfellow

Sample Point: Meter Run

Instrument: 6030_GC2 (Agilent GC-7890B)

Last Inst. Cal.: 09/12/2022 12:00 PM

Analyzed: 09/28/2022 08:35:37 by KNF

Sampled By: Donovan

Sample Of: Gas Spot

Sample Date: 09/27/2022

Sample Conditions: 58.6 psig, @ 96.1 °F Ambient: 89 °F

Effective Date: 09/27/2022

Method: GPA 2286

Cylinder No: 1111-005552

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.696 psia	
Hydrogen Sulfide	0.000	0.60000	0.802		GPM TOTAL C2+ 8.576
Nitrogen	2.728	2.71700	2.986		GPM TOTAL C3+ 4.803
Methane	64.580	64.31800	40.473		GPM TOTAL iC5+ 1.113
Carbon Dioxide	3.085	3.07200	5.303		
Ethane	14.135	14.07800	16.605	3.773	
Propane	8.830	8.79400	15.211	2.428	
Iso-butane	1.264	1.25900	2.870	0.413	
n-Butane	2.698	2.68700	6.126	0.849	
Iso-pentane	0.703	0.70000	1.981	0.257	
n-Pentane	0.628	0.62500	1.769	0.227	
Hexanes Plus	1.155	1.15000	5.874	0.629	
	99.806	100.00000	100.000	8.576	

Calculated Physical Properties

	Total	C6+
Relative Density Real Gas	0.8840	4.4839
Calculated Molecular Weight	25.49	129.87
Compressibility Factor	0.9952	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.696 psia & 60°F

Real Gas Dry BTU	1392	6966
Water Sat. Gas Base BTU	1368	6844
Ideal, Gross HV - Dry at 14.696 psia	1385.6	6965.9
Ideal, Gross HV - Wet	1361.4	0.000

Comments: H2S Field Content 0.6 %

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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Sep. 28, 2022

Station Name: Santa 20 CTB Production
Station Number: 32613007
Station Location: Longfellow
Sample Point: Meter Run
Analyzed: 09/28/2022 08:34:26 by KNFSampled By: Donovan
Sample Of: Gas Spot
Sample Date: 09/27/2022
Sample Conditions: 58.6 psig, @ 96.1 °F
Method: GPA 2286
Cylinder No: 1111-005552

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.696 psia
Hydrogen Sulfide	0.600	0.802	
Nitrogen	2.717	2.986	
Methane	64.318	40.473	
Carbon Dioxide	3.072	5.303	
Ethane	14.078	16.605	3.773
Propane	8.794	15.211	2.428
Iso-Butane	1.259	2.870	0.413
n-Butane	2.687	6.126	0.849
Iso-Pentane	0.700	1.981	0.257
n-Pentane	0.625	1.769	0.227
i-Hexanes	0.139	0.454	0.055
n-Hexane	0.062	0.209	0.025
Benzene	0.088	0.268	0.024
Cyclohexane	0.053	0.175	0.018
i-Heptanes	0.092	0.341	0.037
n-Heptane	0.018	0.068	0.008
Toluene	0.041	0.146	0.014
i-Octanes	0.053	0.242	0.025
n-Octane	0.004	0.023	0.002
Ethylbenzene	0.009	0.037	0.003
Xylenes	0.007	0.029	0.003
i-Nonanes	0.091	0.454	0.050
n-Nonane	0.028	0.143	0.016
Decanes Plus	0.465	3.285	0.349
	100.000	100.000	8.576



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Sep. 28, 2022

Station Name: Santa 20 CTB Production
Station Number: 32613007
Station Location: Longfellow
Sample Point: Meter Run
Analyzed: 09/28/2022 08:34:26 by KNF

Sampled By: Donovan
Sample Of: Gas Spot
Sample Date: 09/27/2022
Sample Conditions: 58.6 psig, @ 96.1 °F
Method: GPA 2286
Cylinder No: 1111-005552

Calculated Physical Properties	Total	C10+
Calculated Molecular Weight	25.49	181.73
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.696 psia & 60°F		
Real Gas Dry BTU	1392.3	9866.7
Water Sat. Gas Base BTU	1368.0	9648.1
Relative Density Real Gas	0.8840	6.2747
Compressibility Factor	0.9952	
Ideal, Gross HV - Wet	1361.4	
Ideal, Gross HV - Dry at 14.696 psia	1385.6	
Net BTU Dry Gas - real gas	1268	
Net BTU Wet Gas - real gas	1246	

Comments: H2S Field Content 0.6 %

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.

37%

Santana 4H	
9/8/2022	23.68
9/7/2022	17.02
9/6/2022	11.1
9/5/2022	10.36
9/4/2022	8.51
9/3/2022	7.03
Total	77.7

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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 158600

DEFINITIONS

Operator: LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225	OGRID: 372210
	Action Number: 158600
	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 158600

QUESTIONS

Operator: LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225	OGRID: 372210
	Action Number: 158600
	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	[30-015-49528] SANTANA STATE COM 20 CD #004H
Incident Facility	Unavailable.

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	Separator
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	64
Nitrogen (N2) percentage, if greater than one percent	3
Hydrogen Sulfide (H2S) PPM, rounded up	1
Carbon Dioxide (CO2) percentage, if greater than one percent	3
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 158600

QUESTIONS (continued)

Operator: LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225	OGRID: 372210
	Action Number: 158600
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	09/03/2022
Time vent or flare was discovered or commenced	08:00 AM
Time vent or flare was terminated	04:00 PM
Cumulative hours during this event	128

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Cause: Initial Flowback Separator Natural Gas Flared Released: 78 Mcf Recovered: 0 Mcf Lost: 78 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	No
Was notification of downstream activity received by this operator	Not answered.
Downstream OGRID that should have notified this operator	Not answered.
Date notified of downstream activity requiring this vent or flare	Not answered.
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.	False
Please explain reason for why this event was beyond this operator's control	Not answered.
Steps taken to limit the duration and magnitude of vent or flare	None
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	None

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ACKNOWLEDGMENTS

Action 158600

ACKNOWLEDGMENTS

Operator: LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225	OGRID: 372210
	Action Number: 158600
	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 158600

CONDITIONS

Operator: LONGFELLOW ENERGY, LP 8115 Preston Road Dallas, TX 75225	OGRID: 372210
	Action Number: 158600
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
mmayo	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.	11/14/2022