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575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

9943G	NCW0001156	Liverboat 12-1 WOMD FC 1H WH Allo	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2021041321	0461	J Thorn - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Apr 22, 2021 10:50	Apr 22, 2021 10:50	May 5, 2021 11:11	May 6, 2021
Date Sampled	Date Effective	Date Received	Date Reported
57.00	2,322.52	Torrance	96 @ 96
Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
Cimarex Energy	NG		
Operator	Lab Source Description		

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	1.0570	1.05739	
CO2 (CO2)	0.0690	0.06907	
Methane (C1)	77.4000	77.39957	
Ethane (C2)	11.2140	11.21445	2.9980
Propane (C3)	5.7010	5.70076	1.5700
I-Butane (IC4)	0.8420	0.84187	0.2750
N-Butane (NC4)	2.0190	2.01877	0.6360
I-Pentane (IC5)	0.4110	0.41093	0.1500
N-Pentane (NC5)	0.4820	0.48245	0.1750
Hexanes Plus (C6+)	0.8050	0.80474	0.3490
TOTAL	100.0000	100.0000	6.1530

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Analyzer Information			
Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	May 3, 2021

Gross Heating Values (Real, BTU/ft³)			
14.696 PSI @ 60.00 Å°F		14.73 PSI @ 60.00 Å°F	
Dry	Saturated	Dry	Saturated
1,298.4	1,277.3	1,301.4	1,280.3

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.7512	0.7486
Molecular Weight	
21.6865	

C6+ Group Properties		
Assumed Composition		
C6 - 60.000%	C7 - 30.000%	C8 - 10.000%

Field H2S
0 PPM

PROTREND STATUS:

Passed By Validator on May 7, 2021

DATA SOURCE:

Imported

PASSED BY VALIDATOR REASON:

Previous sample was suspect

VALIDATOR:

Dustin Armstrong

VALIDATOR COMMENTS:

OK

Release Quantity Calculation / Reporting Requirement

SELECT FACILITY → Display Name RIVERBOAT 12-1 WOPA & WOMD FED COM 1

Facility:	RIVERBOAT 12-1 WOPA & WOMD FED COM 1		
Date/Time Discovered:	1/21/22 8:55 AM	Time Discovered:	8:55:00 AM
Date/Time Started:	1/21/22 4:04 AM	Time Event Started:	4:04:00 AM
Date/Time Ended:	1/21/22 9:36 AM	Time Event Ended:	9:36:00 AM
Event Duration (hrs):	5.533		
Event Duration (days):	1.000		
Ambient Temperature (F):			
Cause (if known):	Valve broke, gas vented to atmosphere and vent was stopped as soon as it was discovered		
No. of Events:			
Notes:	Vented volume provided by Tim Brewer per Scada mass balance		
Corrective Action:			

Updated per Facility Selection

State:	NM
Latitude:	32.22607
Longitude:	-104.23991
GCP IN NM?:	YES
Accumulated Malfunctions VOC (TPY):	0.17

Check Instructions
Enter Gas Analysis
Check Reporting Summary

	= entered info
	= entered from spreadsheet for
	= calculated value
	= dropdowns

Release Source Type and Information

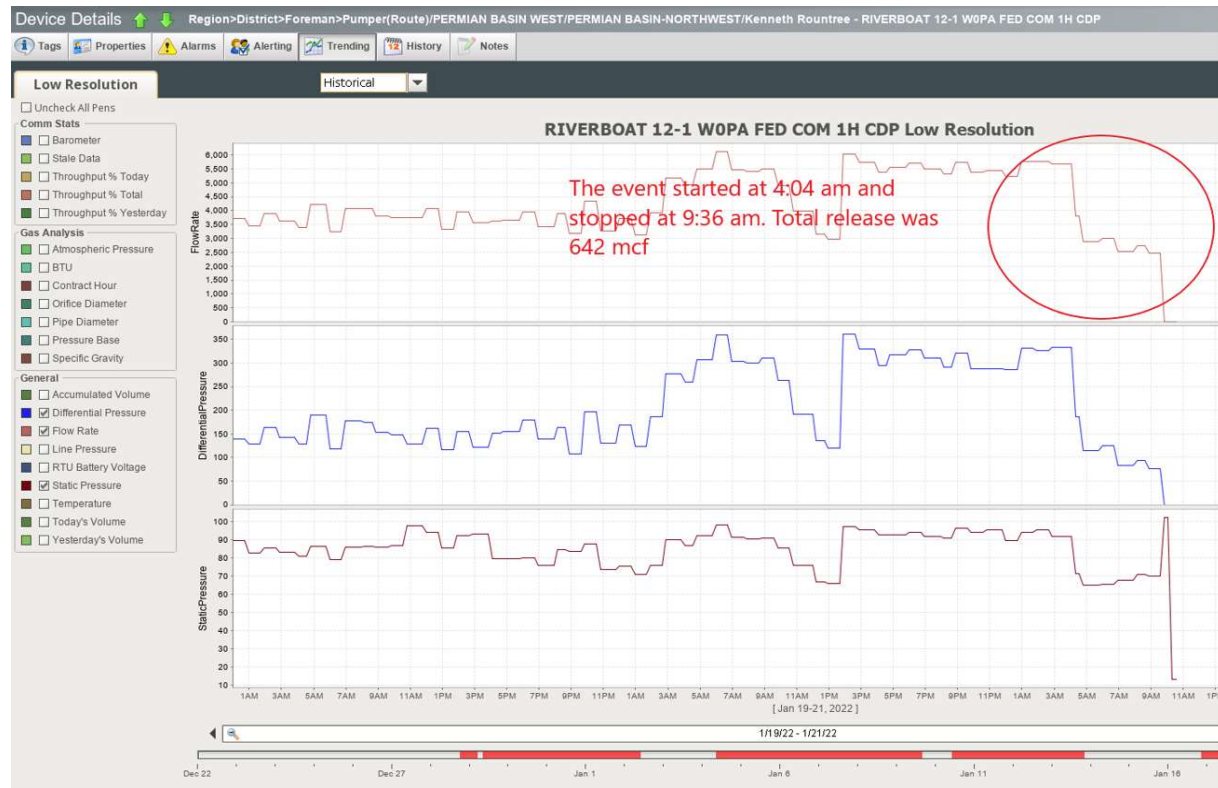
Metered/Estimated Vol (mscf): 642.000 Control Type: None Control Efficiency (%): 0% *adjust manually if needed, this control is for metered/estimated volumes only*

NM Reporting Questions	Did the emission event result in uncontrolled engine emissions vented to atmosphere? (ie. engine burning without catalyst)	No
	If "yes" to the above, is this engine subject to NSPS JJJJ emission limits?	No
CSB Reporting Questions	Did the event result in a fatality or serious injury including hospitalization?	No
	Did the event result in property damage estimated in or excess of \$1million USD?	No
EPCRA Reporting Questions	Did the release result in exposure to persons solely within the boundaries of XEC facility?	Yes
	Is the release a federally permitted release as defined in Section 101(10) of CERCLA?	No

H2S ppm= Enter HERE if not already in the gas analysis in mole %

* use recent gas analysis specific to the facility if available; otherwise use default data for the basin

Component	*mole %	Molecular Weight (grams/mole, lb/lb-mol)	grams per 100 moles of gas	weight %	Total Event Release Amount (lbs)	Total Release Amount 24-hr period (lbs)	Max Hourly Release Amount (lbs)	Tank vented emissions	Dehy vented emissions	Total Event (Vented Gas+Tank Vapors)
								Total Event Tank Emissions (lbs)	Total Event Dehy Emissions (lbs)	
Hydrogen	0.0000	2.01588	0.00	0.000	0.00	0.00	0.00	-	-	0.00
Helium	0.0000	4.0026	0.00	0.000	0.00	0.00	0.00	-	-	0.00
Nitrogen	0.9370	28.01340	26.25	1.202	444.05	444.05	80.25	0.00	0.00	444.05
CO2	0.0360	44.00950	1.58	0.073	26.80	26.80	4.84	0.00	0.00	26.80
H2S**	0.0000	34.08188	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Methane (C1)	76.9640	16.04246	1234.69	56.552	20887.28	20887.28	3774.81	0.00	0.00	20887.28
Ethane (C2)	11.6550	30.06904	350.45	16.052	5928.64	5928.64	1071.44	0.00	0.00	5928.64
Propane (C3)	5.6400	44.09562	248.70	11.391	4207.25	4207.25	760.35	0.00	0.00	4207.25
Butanes (C4)	2.6540	58.12220	154.26	7.065	2609.55	2609.55	471.61	0.00	0.00	2609.55
Pentanes (C5)	1.0560	72.14878	76.19	3.490	1288.89	1288.89	232.93	0.00	0.00	1288.89
Benzene		78.110000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
N-hexane (C6)		86.180000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Other hexanes (C6)	1.0580	86.18000	91.18	4.176	1542.47	1542.47	278.76	0.00	0.00	1542.47
Toluene		92.140000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Other heptanes (C7)	0.0000	100.20000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Ethylbenzene*		106.170000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Xylenes (o, m, p)*		106.170000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Other octanes (C8)	0.0000	114.23000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Nonanes (C9)	0.0000	128.26000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Decanes plus (C10+)	0.0000		0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00
Totals:	100.0000	21.83	2183	100.000						
Natural Gas (VOC) Release (lbs)=					9648.15	9648.15	VOC (lbs)		0.00	9648.15
Total Release (lbs)=					36934.92	36934.92	VOC (TPY)			4.82



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

DEFINITIONS

Action 78278

DEFINITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 78278
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

DEFINITIONS

<p>For the sake of brevity and completeness, please allow for the following in all groups of questions and for the rest of this application:</p> <ul style="list-style-type: none">• 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 78278

QUESTIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 78278
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

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	[215099] CIMAREX ENERGY CO.
Incident Type	Flare
Incident Status	Closure Not Approved
Incident Well	Not answered.
Incident Facility	[fAPP2127736439] RIVERBOAT 12-1 FED COM

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	No
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	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	77
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, Page 2

Action 78278

QUESTIONS (continued)

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 78278
	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	01/21/2021
Time vent or flare was discovered or commenced	04:04 AM
Time vent or flare was terminated	09:36 AM
Cumulative hours during this event	5

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Cause: Equipment Failure Valve Natural Gas Vented Released: 642 Mcf Recovered: 0 Mcf Lost: 642 Mcf
Natural Gas Flared (Mcf) Details	Not answered.
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	True
Please explain reason for why this event was beyond this operator's control	The malfunction was caused by a ball valve that froze on the dump line and separated on the sales scrubber.
Steps taken to limit the duration and magnitude of vent or flare	Pumper called the control room and had them ESD the wells at that point and headed to location to isolate the leak.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Field team fixed ball valve and facility is back online.

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ACKNOWLEDGMENTS

Action 78278

ACKNOWLEDGMENTS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 78278
	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 78278

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 78278
	Action Type: [C-129] Amend Venting and/or Flaring (C-129A)

CONDITIONS

Created By	Condition	Condition Date
jacosta01	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.	2/3/2022