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575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

5827G	NCW0001010	Marguardt 1 Fed 15H WH Alloc.	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2021045270	2214	I Rangel - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Aug 25, 2021 09:30	Aug 25, 2021 09:30	Aug 31, 2021 10:34	Aug 31, 2021
Date Sampled	Date Effective	Date Received	Date Reported
78.00	Luis	116 @ 85	
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)	0.8960	0.89595	
CO2 (CO2)	0.3780	0.37769	
Methane (C1)	78.1510	78.15088	
Ethane (C2)	11.7120	11.71248	3.1310
Propane (C3)	5.2370	5.2374	1.4420
I-Butane (IC4)	0.6070	0.60666	0.1990
N-Butane (NC4)	1.5030	1.50265	0.4740
I-Pentane (IC5)	0.3570	0.35654	0.1310
N-Pentane (NC5)	0.3940	0.39441	0.1430
Hexanes Plus (C6+)	0.7650	0.76533	0.3320
TOTAL	100.0000	100.0000	5.8520

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: Aug 22, 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
1,270.8	1,250.2	1,273.7	1,253.1

Calculated Total Sample Properties

GPA2145-16 *Calculated at Contract Conditions

Relative Density Real	Relative Density Ideal
0.7367	0.7343
Molecular Weight	
21.2668	

C6+ Group Properties

Assumed Composition

C6 - 60.000%	C7 - 30.000%	C8 - 10.000%
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Field H2S
0 PPM

PROTREND STATUS:

Passed By Validator on Sep 1, 2021

DATA SOURCE:

Imported

PASSED BY VALIDATOR REASON:

Close enough to be considered reasonable.

VALIDATOR:

Dustin Armstrong

VALIDATOR COMMENTS:

OK

SELECT FACILITY → **DisplayName** MARQUARDT 1 FEDERAL 15H&16H

Check Instructions
Enter Gas Analysis
Check Reporting Summary

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

Metered/Estimated Vol (mscf).	96.1
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H2S ppm= Enter HERE if not already in the gas analysis in mole %

Tank vented emissions	Dehy vented emissions
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Incident gas analysis specific to the facility's activities, operating data, vent data for the station														
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)	Total Event Tank Emissions (lbs)	Total Event Dehy Emissions (lbs)	Total Event (Vented Gas+Tank Vapors)	Reportable Amount 24-hr (lbs) for TX Reporting	Reportable Amount 24-hr (lbs) for NRC Reporting	Component to Report to TCEQ	Component to Report to NRC
Hydrogen	0.0000	2.01588	0.00	0.000	0.00	0.00	0.00	0.00	-	0.00	NA	NA	-	-
Helium	0.0000	4.0026	0.00	0.000	0.00	0.00	0.00	0.00	-	0.00	NA	NA	-	-
Nitrogen	0.8960	28.01340	25.10	1.183	63.57	58.88	2.44	0.00	0.00	63.57	5000	NA	-	-
CO2	0.3760	44.09560	16.64	0.784	42.13	38.89	1.82	0.00	0.00	42.13	NA	NA	-	-
CO*	0.0200	34.04168	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	100	NA	-	-
Methane (C1)	78.1510	16.04246	1253.73	59.102	3175.28	2931.03	122.13	0.00	0.00	3175.28	NA	NA	-	-
Ethane (C2)	11.7120	30.06904	352.17	16.601	891.92	823.31	34.30	0.00	0.00	891.92	NA	NA	-	-
Propane (C3)	5.2370	44.09562	230.93	10.886	584.86	539.87	22.49	0.00	0.00	584.86	5000	NA	-	-
Butanes (C4)	2.1100	58.12220	122.64	5.781	310.60	286.71	11.95	0.00	0.00	310.60	5000	NA	-	-
Pentanes (C5)	0.7510	72.14878	54.18	2.554	137.23	126.67	5.28	0.00	0.00	137.23	5000	NA	-	-
Hexane		78.110000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	10	10	-	-
N-hexane (C6)		86.180000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	5000	5000	-	-
Other hexanes (C6)	0.7650	86.18000	65.93	3.108	166.97	154.13	6.42	0.00	0.00	166.97	5000	5000	-	-
Toluene		92.140000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	1000	1000	-	-
Other heptanes (C7)	0.0000	100.20000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	100	100	-	-
Ethylbenzene*		106.170000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	1000	1000	-	-
Xylenes (o, m, p)*		106.170000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	100	100	-	-
Other octanes (C8)	0.0000	114.23000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	5000	NA	-	-
Nonanes (C9)	0.0000	128.26000	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	100	NA	-	-
Decanes plus (C10+)	0.0000		0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	5000	NA	-	-
Totals	100.0000	21.21			1199.67	1107.38		0.00	0.00	1199.67	5000	NA	-	-
					Natural Gas (VOC) Release (lbs)=	1199.67	1107.38	VOC (lbs)		0.00				
					Total Release (lbs)=	5372.58	4959.30							
VOC (Non-methane, Non-ethane hydrocarbons) VOC content of total sample = 22.33 VOC weight fraction = 0.22					Combustion Emissions	*Calculated via mass balance				VOC (lbs)				
						SO2 (lbs)				0.00	0.00	0.00	0.00	
						CO (lbs)				0.00	0.00	0.00	0.00	
						CO2 (lbs)				0.00	0.00	0.00	0.00	
						NOx (lbs)				0.00	0.00	0.00	0.00	
					Split NOx - NO (lbs)				0.00	0.00	0.00	0.00		
					Split NOx - NO2 (lbs)				0.00	0.00	0.00	0.00		
VOC content of hydrocarbon fraction only											Combustion Related RGs			
VOC weight fraction = 22.78											VOC (lbs)			
VOC weight fraction = 0.23											SO2 (lbs)			
											CO (lbs)			
											CO2 (lbs)			
											NOx (lbs)			
											Split NOx - NO (lbs)			
											Split NOx - NO2 (lbs)			
VOC/NOx ratio=0.75 per https://www3.epa.gov/ttn/scam/guidance/guid3appg_05.pdf														

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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 106381

DEFINITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 106381
	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: <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 106381

QUESTIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 106381
	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	Not answered.
Incident Facility	[fAPP2202783215] MARQUARDT 1 FEDERAL 15H&16H

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, 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 withing 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	78
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	1
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 106381

QUESTIONS (continued)

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 106381
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	05/10/2022
Time vent or flare was discovered or commenced	02:30 PM
Time vent or flare was terminated	04:30 PM
Cumulative hours during this event	26

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Cause: Other Valve Natural Gas Vented Released: 205 Mcf Recovered: 0 Mcf Lost: 205 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	Breather plug leaking from bp valve.
Steps taken to limit the duration and magnitude of vent or flare	Closed off leak.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Routine maintenance.

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ACKNOWLEDGMENTS

Action 106381

ACKNOWLEDGMENTS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 106381
	Action Type: [C-129] Venting and/or Flaring (C-129)

ACKNOWLEDGMENTS

<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<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 106381

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 106381
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
bgordon01	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.	5/12/2022