Certificate of Analysis

Number: 6030-21020006-003A

Artesia Laboratory
200 E Main St.
Artesia, NM 88210
Phone 575-746-3481

Cimarex Energy
Cimarex Energy
7023 Norris Rd.
Carlsbad, NM 88220

Feb. 03, 2021

Station Name:	Cascade 29 Fed CDP Check	Sampled By:	Victor Velazquez
Station Number:	NCP1471196	Sample Of:	Gas Spot
Station Location:	Cimarex	Sample Date:	01/29/2021 12:54
Sample Point:	Meter Run	Sample Conditions:	74 psig, @ 57 °F Ambient: 45 °F
Type of Sample:	Spot-Cylinder	Effective Date:	01/29/2021 12:54
Heat Trace Used:	N/A	Method:	GPA-2261M
Sampling Method:	Fill and Purge	Cylinder No:	1111-002509
Sampling Company:	SPL	Instrument:	70104251 (Inficon GC-MicroFusion)
C6+ Group Properties:	60/30/10% - C6/C7/C8	Last Inst. Cal.:	02/01/2021 0:00 AM
		Analyzed:	02/03/2021 12:03:14 by KNF

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.73 psia		
Hydrogen Sulfide	0.000	0.00000	0.000		GPM TOTAL C2+	6.411
Nitrogen	2.014	2.01099	2.443		GPM TOTAL C3+	3.254
Methane	71.112	71.01984	49.399		GPM TOTAL iC5+	0.523
Carbon Dioxide	4.441	4.43544	8.463			
Ethane	11.777	11.76142	15.333	3.157		
Propane	6.604	6.59513	12.609	1.824		
Iso-butane	0.820	0.81864	2.063	0.269		
n-Butane	2.019	2.01678	5.082	0.638		
Iso-pentane	0.446	0.44542	1.393	0.164		
n-Pentane	0.447	0.44622	1.396	0.162		
Hexanes Plus	0.451	0.45012	1.819	0.197		
	100.131	100.00000	100.000	6.411		

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Physical Properties	**Total**	**C6+**
Relative Density Real Gas	0.7993	3.2176
Calculated Molecular Weight	23.06	93.19
Compressibility Factor	0.9960	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.73 psia & 60°F		
Real Gas Dry BTU	1250	5141
Water Sat. Gas Base BTU	1229	5052
Ideal, Gross HV - Dry at 14.73 psia	1245.5	
Ideal, Gross HV - Wet	1223.8	
Calculated Gross BTU per ft³ @ 14.696 psia & 60°F		
Real Gas Dry BTU	1248	5129
Water Sat. Gas Base BTU	1226	5040
Ideal, Gross HV - Dry at 14.73 psia	1242.6	
Ideal, Gross HV - Wet	1220.9	

Comments: H2S Field Content 0 ppm
Mcf/day 3602.8823

Hydrocarbon Laboratory Manager

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

CASCADE 29 FEDERAL 3H FLARE Digital (gas) 14448

		21	8/20/2021	8/19/2021	8/18/2021	8/17/2021	8/16/2021	8/15/2021	8/14/2021	8/13/2021
Static	(PSI)	117	103	86	81	69	94	91	91	95
Differential	(In H2O	0	0	0	0	0	0	0	0	0
Gas Flowed	(MCF)	0.0	0.0	0.0	0.0	161.0	7.0	0.0	0.0	631.0

District I
1625 N. French Dr., Hobbs, NM 88240
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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

QUESTIONS

Action 44785

QUESTIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 44785
	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	**[fAPP2123928540] CASCADE 29 FEDERAL 3**

Determination of Reporting Requirements	
Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide addional guidance.	
Was or is this venting and/or flaring caused by an emergency or malfunction	Yes
Did or will this venting and/or flaring last eight hours or more cumulatively within any 24-hour period from a single event	No
Is this considered a submission for a notification of a major venting and/or flaring	**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 or will there be **at least 50 MCF** of natural gas vented and/or flared during this event	Yes
Did this venting and/or flaring 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 venting and/or flaring 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	71
Nitrogen (N2) percentage, if greater than one percent	2
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (C02) percentage, if greater than one percent	4
Oxygen (02) 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 Sufide (H2S) PPM quality requirement	*Not answered.*
Carbon Dioxide (C02) percentage quality requirement	*Not answered.*
Oxygen (02) percentage quality requirement	*Not answered.*

Date(s) and Time(s)	
Date venting and/or flaring was discovered or commenced	08/13/2021
Time venting and/or flaring was discovered or commenced	07:15 AM
Time venting and/or flaring was terminated	12:00 PM
Cumulative hours during this event	3

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	*Not answered.*

Natural Gas Flared (Mcf) Details	Cause: Equipment Failure | Valve | Natural Gas Flared | Released: 799 Mcf | Recovered: 0 Mcf | Lost: 799 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 or is this venting and/or flaring a result of downstream activity	*Not answered.*
Date notified of downstream activity requiring this venting and/or flaring	*Not answered.*
Time notified of downstream activity requiring this venting and/or flaring	*Not answered.*

Steps and Actions to Prevent Waste	
For this event, the operator could not have reasonably anticipated the current event and it was beyond the operator's control.	True
Please explain reason for why this event was beyond your operator's control	The cause was an upset on our third party gas gatherer shutdown valve closed on the facility unexpectedly. Regulatory alerted OCD due to the amount flared via e-mail on 8-13-2021.
Steps taken to limit the duration and magnitude of venting and/or flaring	Issue was resolved but Cimarex has to fine tune its flare shutdowns at the battery to make sure that this doesn't happen again.
Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring	As noted. The issue was resolved but Cimarex has to fine tune its flare shutdowns at the battery to make sure that this doesn't happen again.

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CONDITIONS

Action 44785

CONDITIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 44785
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
jacosta01	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.	8/27/2021