



Certificate of Analysis

Number: 6030-21020006-001A

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:	Vaca Draw 20-17 Fed 71H WH Allocation	Sampled By:	Victor Velazquez
Station Number:	NCW1471465	Sample Of:	Gas Spot
Station Location:	Cimarex	Sample Date:	01/29/2021 10:50
Sample Point:	Meter Run	Sample Conditions:	152 psig, @ 85 °F Ambient: 40 °F
Type of Sample:	Spot-Cylinder	Effective Date:	01/29/2021 10:50
Heat Trace Used:	N/A	Method:	GPA-2261M
Sampling Method:	Fill and Purge	Cylinder No:	5030-01135
Sampling Company:	SPL	Instrument:	6030_GC6 (Inficon GC-3000 Micro)
C6+ Group Properties:	60/30/10% - C6/C7/C8	Last Inst. Cal.:	02/01/2021 0:00 AM
		Analyzed:	02/03/2021 12:10:11 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+	5.827
Nitrogen	2.457	2.43669	3.004		GPM TOTAL C3+	2.970
Methane	73.098	72.48778	51.176		GPM TOTAL iC5+	0.530
Carbon Dioxide	4.705	4.66563	9.036			
Ethane	10.733	10.64351	14.084	2.857		
Propane	5.820	5.77182	11.201	1.596		
Iso-butane	0.757	0.75019	1.919	0.246		
n-Butane	1.906	1.88969	4.834	0.598		
Iso-pentane	0.434	0.42988	1.365	0.158		
n-Pentane	0.449	0.44505	1.413	0.162		
Hexanes Plus	0.484	0.47976	1.968	0.210		
	100.843	100.00000	100.000	5.827		



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Physical Properties	Total	C6+
Relative Density Real Gas	0.7873	3.2176
Calculated Molecular Weight	22.72	93.19
Compressibility Factor	0.9962	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.73 psia & 60°F		
Real Gas Dry BTU	1219	5141
Water Sat. Gas Base BTU	1198	5052
Ideal, Gross HV - Dry at 14.73 psia	1214.2	
Ideal, Gross HV - Wet	1193.1	
Calculated Gross BTU per ft³ @ 14.696 psia & 60°F		
Real Gas Dry BTU	1216	5129
Water Sat. Gas Base BTU	1195	5040
Ideal, Gross HV - Dry at 14.73 psia	1211.4	
Ideal, Gross HV - Wet	1190.3	

Comments: H2S Field Content 0 ppm
Mcf/day 3412

Hydrocarbon Laboratory Manager

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

2021-05-30	0	0	56.11	0	76	0	0	100
2021-05-29	222.63	265.38	113.66	57.62	75	47.03	3.27	96.73

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

QUESTIONS

Action 30931

QUESTIONS

Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099 Action Number: 30931 Action Type: [C-129] Venting and/or Flaring (C-129)
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QUESTIONS

Determination of Reporting Requirements	
<i>Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.</i>	
Was or is this venting or flaring caused by an emergency or malfunction	Yes
Did or will this venting 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 or flaring	Yes, minor venting or flaring of natural gas.
The operator shall file a form C-141 instead of a form C-129 for a release that includes liquid during venting or flaring that is or may be a major or minor release under 19.13.297 NMAC.	
Was there or will there be at least 50 MCF of natural gas vented or flared during this event	Yes
Did this venting 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

Unregistered Facility Site	
<i>Please provide the facility details, if the venting or flaring occurred or is occurring at a facility that does not have an Facility ID (##) yet.</i>	
Facility or Site Name	Vaca draw 20-17 Fed 5H-73H Flare 1
Facility Type	Flare Stack - (FS)

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	
<i>Please provide the mole percent for the percentage questions in this group.</i>	
Methane (CH4) percentage	73
Nitrogen (N2) percentage, if greater than one percent	2
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (CO2) percentage, if greater than one percent	5
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.

Date(s) and Time(s)	
Date venting or flaring was discovered or commenced	06/01/2021
Time venting or flaring was discovered or commenced	07:15 AM
Is the venting or flaring event complete	Yes
Date venting or flaring was terminated	05/30/2021
Time venting or flaring was terminated	02:00 AM
Total duration of venting or flaring in hours, if venting or flaring has terminated	1
Longest duration of cumulative hours within any 24-hour period during this event	1

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Cause: High Line Pressure Gas Compressor Station Natural Gas Flared Spilled: 223 Mcf Recovered: 0 Mcf Lost: 223 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 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 or flaring a result of downstream activity	Yes
Date notified of downstream activity requiring this venting or flaring	Not answered.
Time notified of downstream activity requiring this venting or flaring	Not answered.

Steps and Actions to Prevent Waste	
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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	Third party gatherer had issues at the compressor station that caused line pressure to rise and sales rates to be limited.
Steps taken to limit the duration and magnitude of venting or flaring	The wells had to be choked back/shut-in to reduce flaring. The issue was abrupt, so the majority of the flaring was incurred while our operators were enroute to address the issue.
Corrective actions taken to eliminate the cause and reoccurrence of venting or flaring	Dialogue with third party gas gatherer to alert operator on disruptions.

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CONDITIONS

Action 30931

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Operator: CIMAREX ENERGY CO. 600 N. Marienfeld Street Midland, TX 79701	OGRID: 215099
	Action Number: 30931
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
system	If the information provided in this report requires an amendment, submit a [C-129] Request to Amend Venting and/or Flaring Incident, utilizing your incident number from this event.	6/8/2021