



## Certificate of Analysis

Number: 6030-20020127-004A

Artesia Laboratory

200 E Main St.

Artesia, NM 88210

Phone 575-746-3481

Chandler Montgomery  
Occidental Petroleum  
1502 W Commerce Dr.  
Carlsbad, NM 88220

Feb. 25, 2020

Field: Cedar Canyon  
Station Name: Corral Fly 2\_1 St 21H GL  
Station Number: 181211  
Station Location: OXY  
Sample Point: Meter Run  
Formation: Quarterly  
County: Eddy  
Type of Sample: : Spot-Cylinder  
Heat Trace Used: N/A  
Sampling Method: : Fill and Purge  
Sampling Company: : SPL

Sampled By: Chad Whitt  
Sample Of: Gas Spot  
Sample Date: 02/20/2020 01:00  
Sample Conditions: 1161.4 psig, @ 85.7 °F Ambient: 40 °F  
Effective Date: 02/20/2020 01:00  
Method: GPA-2261M  
Cylinder No: 1111-002459  
Instrument: 6030\_GC2 (Agilent 7890B)  
Last Inst. Cal.: 02/17/2020 17:06 PM  
Analyzed: 02/25/2020 10:15:03 by User1

## Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.65 psia		
Nitrogen	1.298	1.304	1.730		GPM TOTAL C2+	5.911
Methane	77.087	77.445	58.835		GPM TOTAL C3+	2.695
Carbon Dioxide	0.137	0.138	0.288		GPM TOTAL iC5+	0.353
Ethane	11.993	12.049	17.158	3.216		
Propane	5.740	5.767	12.043	1.585		
Iso-butane	0.710	0.713	1.963	0.233		
n-Butane	1.658	1.666	4.586	0.524		
Iso-pentane	0.320	0.321	1.097	0.117		
n-Pentane	0.334	0.336	1.148	0.122		
Hexanes Plus	0.260	0.261	1.152	0.114		
	99.537	100.000	100.000	5.911		

## Calculated Physical Properties

Relative Density Real Gas	Total	C6+
	0.7314	3.2176
Calculated Molecular Weight	21.12	93.19
Compressibility Factor	0.9964	

## GPA 2172 Calculation:

Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia & 60°F

Real Gas Dry BTU	1258	5113
Water Sat. Gas Base BTU	1237	5024
Ideal, Gross HV - Dry at 14.65 psia	1253.8	5113.2
Ideal, Gross HV - Wet	1231.9	
Net BTU Dry Gas - real gas	1142	
Net BTU Wet Gas - real gas	1122	

Comments: H<sub>2</sub>S Field Content 0 ppm  
Mcf/day 1444.2

Hydrocarbon Laboratory Manager

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

**EVENT SPECIFIC JUSTIFICATIONS FORM****Facility:** Corral 2S CS**Start Date:** 08/05/2021**End Date:** 08/05/2021**Cause:** Malfunction**Duration of event:** 50 minutes**MCF Volume Flared:** 329**Method of Flared Gas Measurement:** Flare Meter

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**1. Reason why this event was beyond Operator's control:**

This emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control, and did not stem from activity that could have been foreseen and avoided, and could not have been avoided or prevented by good design, operation, and preventative maintenance practices. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown, due to malfunction and/or alarms, production techs are promptly notified, and are instructed to assess the issue as soon as possible in order to take prompt corrective action and minimize emissions.

During this event, the flaring was caused when the station unexpectedly shut down while an automation contractor was performing work no shut down alarms at the station. Oxy personnel immediately responded to reset the units and restart gas compression. Once all units and equipment were back online, all flaring ceased. During the event, OXY routed all the stranded sales gas to a flare with a 98% combustion efficiency in order to minimize emissions as much as possible.

**2. Steps Taken to limit duration and magnitude of venting or flaring:**

In this case, Oxy responded immediately responded to the shutdown in order to restart the gas compressors unit and restoring gas sales at which time flaring ceased.

**3. Corrective Actions taken to eliminate the cause and reoccurrence of venting or flaring:**

The emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control and did not stem from activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices. Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of compressor malfunctions as notwithstanding proper gas compressor design, operation, and maintenance; various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected. Oxy continually strives to maintain and operate its facility equipment in a manner consistent with good practices for minimizing emissions and reducing the number of emission events. Oxy has a dedicated compression equipment preventative maintenance program in place.

**District I**

1625 N. French Dr., Hobbs, NM 88240  
Phone:(575) 393-6161 Fax:(575) 393-0720

**District II**

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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 42376

**QUESTIONS**

Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 42376
	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	[30-015-44507] CORRAL FLY 02 01 STATE #021H
Incident Facility	Not answered.

**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 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, 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 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	Other (Specify)
Additional details for Equipment Involved. Please specify	emergency flare due to compressor malfunction

**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.

**Date(s) and Time(s)**

Date venting and/or flaring was discovered or commenced	08/05/2021
Time venting and/or flaring was discovered or commenced	12:00 AM
Time venting and/or flaring was terminated	12:50 AM
Cumulative hours during this event	1

**Measured or Estimated Volume of Vented or Flared Natural Gas**

Natural Gas Vented (Mcf) Details	Not answered.
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Natural Gas Flared (Mcf) Details	Cause: Other   Other (Specify)   Natural Gas Flared   Released: 329 Mcf   Recovered: 0 Mcf   Lost: 329 Mcf ]
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	flare meter
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	This emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control, and did not stem from activity that could have been foreseen and avoided, and could not have been avoided or prevented by good design, operation, and preventative maintenance practices. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown, due to malfunction and/or alarms, production techs are promptly notified, and are instructed to assess the issue as soon as possible in order to take prompt corrective action and minimize emissions. During this event, the flaring was caused when the station unexpectedly shut down while an automation contractor was performing work no shut down alarms at the station. Oxy personnel immediately responded to reset the units and restart gas compression. Once all units and equipment were back online, all flaring ceased. During the event, OXY routed all the stranded sales gas to a flare with a 98% combustion efficiency in order to minimize emissions as much as possible.
Steps taken to limit the duration and magnitude of venting and/or flaring	In this case, Oxy responded immediately responded to the shutdown in order to restart the gas compressors unit and restoring gas sales at which time flaring ceased.
Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring	The emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable breakdown of equipment or process that was beyond the owner/operator's control and did not stem from activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices. Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of compressor malfunctions as notwithstanding proper gas compressor design, operation, and maintenance; various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected. Oxy continually strives to maintain and operate its facility equipment in a manner consistent with good practices for minimizing emissions and reducing the number of emission events. Oxy has a dedicated compression equipment preventative maintenance program in place.

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CONDITIONS  
  
Action 42376

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Operator: OXY USA INC P.O. Box 4294 Houston, TX 772104294	OGRID: 16696
	Action Number: 42376
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
shelbyschoepf	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.	8/16/2021