

# Certificate of Analysis

Number: 6030-21090237-002A

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

Chandler Montgomery Occidental Petroleum 1502 W Commerce Dr. Carlsbad, NM 88220 Oct. 01, 2021

Field: Turkey Sampled By: Michael Mirabal Station Name: Turkey Track CTB Check A Sample Of: Gas Spot Station Number: 14670A Sample Date: 09/24/2021 01:28

Station Number: 14670A Sample Date: 09/24/2021 01:26

Station Location: CTB Sample Conditions: 72 psia, @ 89 °F Ambient: 85 °F

Sample Point: Meter Effective Date: 09/24/2021 01:28

Formation: Monthly Method: CRA 3261M

Formation: Monthly Method: GPA-2261M
County: Eddy, NM Cylinder No: 5030-04971
Type of Sample: Spot-Cylinder Instrument: 6030\_GC2 (Agilent GC-7890B)

Heat Trace Used: N/A Last Inst. Cal.: 09/13/2021 15:05 PM Sampling Method: Fill and Purge Analyzed: 09/29/2021 11:37:10 by KNF

Sampling Company: : SPL

## **Analytical Data**

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	0.000	0.000	0.000		GPM TOTAL C2+	6.181
Nitrogen	2.077	2.055	2.631		GPM TOTAL C3+	3.073
Methane	77.029	76.211	55.875		GPM TOTAL iC5+	0.815
Carbon Dioxide	0.226	0.224	0.451			
Ethane	11.768	11.643	16.000	3.108		
Propane	5.465	5.407	10.896	1.487		
lso-butane	0.729	0.721	1.915	0.236		
n-Butane	1.719	1.701	4.518	0.535		
Iso-pentane	0.497	0.492	1.622	0.180		
n-Pentane	0.517	0.512	1.688	0.185		
Hexanes Plus	1.045	1.034	4.404	0.450		
	101.072	100.000	100.000	6.181		
Calculated Physical Properties		To	otal	C6+		
Relative Density Rea		0.75	581	3.2176		
Calculated Molecular Weight		21	.88	93.19		
Compressibility Fact			961			
	GPA 2172 Calculation:					
Calculated Gross B	STU per ft <sup>3</sup> @ 14.65 ps	sia & 60°F				
Real Gas Dry BTU			285	5113		
Water Sat. Gas Base BTU		12	263	5024		
Ideal, Gross HV - Dry at 14.65 psia		128	0.0	5113.2		
Ideal, Gross HV - Wet		125	7.6	5023.7		
Net BTU Dry Gas - real gas		11	167			
Net BTU Wet Gas - real gas		11	147			
Comments: H28 Field Content 2.5 npm						

Comments: H2S Field Content 2.5 ppm

Mcf/day 186.55

Data reviewed by: Krystle Fitzwater, Laboratory Manager

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

### **UPSET FLARING EVENT SPECIFIC JUSTIFICATIONS FORM**

Facility: Turkey Track CTB Flare Date: 04/05/2022

**Duration of event:** 45 minutes **MCF Flared:** 357

Start Time: 05:00 PM End Time: 05:45 PM

**Cause:** Multiple Compressor Malfunctions > Detonation

Method of Flared Gas Measurement: Gas Flare Meter

**Comments:** This upset event was not caused by any wells associated with the facility.

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

In this case, USA sales gas compressor unit 1 and NGSG sales gas compressor units # 3 & 4 automatically shut down at the same time due to compressor malfunctions caused by cylinder detonation. A detonation compressor malfunction can be caused by any number of things, such as fuel quality change, temperature changes, psi changes, oil issues, plugs and valves failing, etc., yet as it pertains to this event, there were no alarms on the compressor CAT panel, to indicate why a detonation malfunction occurred, given that the units underwent a comprehensive preventative maintenance workup not too long ago and such work was performed by the compression owner, USA Compression. Detonation is an internal compressor malfunction and notwithstanding proper gas compressor design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected which can cause compressor unit malfunctions to occur without warning or advance notice. With the multiple gas compressors down, there was no gas takeaway, and thus field psi increased until set psi levels were reached which triggered flaring, as a safety measure for operations, facility equipment, and personnel. All gas compressor units were working as designed and operated normally prior to the sudden and without warning detonation malfunctions of these gas compressor units. This incident was completely out of OXY's control to prevent from happening yet OXY made every effort to control and minimize emissions as much as possible during this event by working safely and diligently during this event.

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

It is OXY's policy to route all stranded gas to a flare during an unforeseen and unavoidable emergency or malfunction, as the part of the overall process or steps to take to limit duration and magnitude of flaring. Oxy personnel are in the field 24/7 and can physically see when we are flaring which in turn are communicated to additional Oxy field personnel. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown alarms, increased sensor pressure alarms, etc., field production technician personnel are promptly notified, and are instructed to assess the issue as soon as possible in order to take prompt corrective action and minimize emissions. Oxy production technicians must assess whether the issue or circumstance is due to damage and repair is needed, or whether there are other reasons for its cause.

In this case, USA sales gas compressor unit 1 and NGSG sales gas compressor units # 3 & 4 automatically shut down at the same time due to compressor malfunctions caused by cylinder detonation. A detonation compressor malfunction can be caused by any number of things, such as fuel quality change, temperature changes, psi changes, oil issues, plugs and valves failing, etc., yet as it pertains to this event, there were no alarms on the compressor CAT panel, to indicate why a detonation malfunction occurred, given that the units underwent a comprehensive preventative maintenance workup not too long ago and such work was performed by the compression owner, USA Compression. An Oxy production tech was not on-site when the compressor malfunctions occurred, but did receive the compressor malfunction alarms and quickly arrived to the facility and immediately began to inspect the gas compressor units to determine cause of the malfunctions. Finding no other cause, except for detonation malfunctions off the CAT panel, the production tech was able to clear the malfunction alarms and restart the gas compressor units. Shortly thereafter, once the gas compressor reached its optimized working operation and speed, did flaring cease. The production tech stayed on-site for a short period of time in order to monitor the sales gas compressor units. No further incidents occurred. OXY made every effort to control and minimize emissions as much as possible during this event by working safely and diligently to resolve the issues.

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

Oxy is limited in the corrective actions to eliminate this type of cause and potential reoccurrence of flaring as notwithstanding proper gas compressor design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected which can cause compressor unit malfunctions to occur without warning or advance notice. 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 strong and positive compression equipment preventative maintenance program in place. The only actions that Oxy can take and handle that is within its control, is to keep continue with its compression equipment preventative maintenance program for this facility and its compression equipment.

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

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 100408

#### **DEFINITIONS**

Operator:	OGRID:
OXY USA WTP LIMITED PARTNERSHIP	192463
P.O. Box 4294	Action Number:
Houston, TX 772104294	100408
	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:

- 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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**State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. **Santa Fe, NM 87505** 

QUESTIONS

Action 100408

C (1000) 470 0470 1 04.(1000) 470 0402	UESTIONS	
Operator:		OGRID:
OXY USA WTP LIMITED PARTNERSHIP		192463
P.O. Box 4294 Houston, TX 772104294		Action Number: 100408
		Action Type:
QUESTIONS		[C-129] Venting and/or Flaring (C-129)
Prerequisites		
Any messages presented in this section, will prevent submission of this application. Please resolve	these issues before continuing wi	th the rest of the questions.
Incident Well	Not answered.	
Incident Facility	[fAPP2126265645] TURKEY TRACK CTB	
Determination of Reporting Requirements		
Answer all questions that apply. The Reason(s) statements are calculated based on your answers and		
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, 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 v	renting 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 <b>ANY</b> 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		
	T	
Primary Equipment Involved	Other (Specify)	
Additional details for Equipment Involved. Please specify	Emergency Flare > Multiple	e Compressor Malfunctions > Detonation
Representative Compositional Analysis of Vented or Flared Natural Gas		
Please provide the mole percent for the percentage questions in this group.		
Methane (CH4) percentage	76	
Nitrogen (N2) percentage, if greater than one percent	2	
Hydrogen Sulfide (H2S) PPM, rounded up	2	
Carbon Dioxide (C02) percentage, if greater than one percent	0	
Oxygen (02) percentage, if greater than one percent	0	
If you are venting and/or flaring because of Pipeline Specification, please provide the required spec	ifications 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.	

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District IV

# **State of New Mexico Energy, Minerals and Natural Resources Oil Conservation Division** 1220 S. St Francis Dr. Santa Fe NM 87505

QUESTIONS, Page 2 Action 100408

1220 S. St Francis Dr., Santa Fe, NM 87505 Phone:(505) 476-3470 Fax:(505) 476-3462	a 1 c, 1411 07 000
QUES	TIONS (continued)
Operator: OXY USA WTP LIMITED PARTNERSHIP	OGRID: 192463
P.O. Box 4294 Houston, TX 772104294	Action Number: 100408
Houston, 17/1/2104234	Action Type:
OUTOTION O	[C-129] Venting and/or Flaring (C-129)
QUESTIONS  Date(s) and Time(s)	
Date vent or flare was discovered or commenced	01/05/0000
Time vent or flare was discovered or commenced	04/05/2022 05:00 PM
Time vent or flare was terminated	05:45 PM
Cumulative hours during this event	1
Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Т
	Not answered.  Cause: Other   Other (Specify)   Natural Gas Flared   Released: 357 Mcf   Recovered: 0 Mcf
Natural Gas Flared (Mcf) Details	Lost: 357 Mcf]
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Gas 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 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 even and it was beyond this operator's control.	True
Please explain reason for why this event was beyond this operator's control	In this case, USA sales gas compressor unit 1 and NGSG sales gas compressor units # 3 8 4 automatically shut down at the same time due to compressor malfunctions caused by cylinder detonation. A detonation compressor malfunction can be caused by any number of things, such as fuel quality change, temperature changes, psi changes, oil issues, plugs and valves failing, etc., yet as it pertains to this event, there were no alarms on the compressor CAT panel, to indicate why a detonation malfunction occurred, given that the units underwent a comprehensive preventative maintenance workup not too long ago and such work was performed by the compression owner, USA Compression. Detonation is an internal compressor malfunction and notwithstanding proper gas compressor design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected which can cause compressor unit malfunctions to occur without warning or advance notice. With the multiple gas compressors down, there was no gas takeaway, and thus field psi increased until set psi levels were reached which triggered flaring, as a safety measure for operations, facility equipment, and personnel. All gas compressor units were working as designed and operated normally prior to the sudden and without warning detonation malfunctions of these gas compressor units. This incident was completely out of OXY's control to prevent from happening yet OXY made every effort to control and minimize emissions as much as possible during this event by working safely and diligently during this event.
Steps taken to limit the duration and magnitude of vent or flare	It is OXY's policy to route all stranded gas to a flare during an unforeseen and unavoidable emergency or malfunction, as the part of the overall process or steps to take to limit duration and magnitude of flaring. Oxy personnel are in the field 24/7 and can physically see when we are flaring which in turn are communicated to additional Oxy field personnel. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown alarms, increased sensor pressure alarms, etc., field production technician personnel are promptly notified, and are instructed to assess the issue as soon as possible in order to take prompt corrective action and minimize emissions. Oxy production technicians must assess whether the issue or circumstance is due to damage and repair is needed, or whether there are othe reasons for its cause. In this case, USA sales gas compressor unit 1 and NGSG sales gas compressor units # 3 & 4 automatically shut down at the same time due to compressor malfunctions caused by cylinder detonation. A detonation compressor malfunction can be caused by any number of things, such as fuel quality change, temperature changes, psi changes, oil issues, plugs and valves failing, etc., yet as it pertains to this event, there were no alarms on the compressor CAT panel, to indicate why a detonation malfunction occurred, given that the units underwent a comprehensive preventative maintenance workup not too long ago and such work was performed by the compression owner, USA Compression. An Oxy production tech was not on-site when the compressor malfunctions occurred, but did receive the compressor malfunction alarms and quickly arrived to the facility and immediately began to inspect the gas compressor units to determine cause of the malfunctions. Finding no other cause, except for detonation malfunctions off the CAT panel, the production tech was able to clear the malfunction alarms and restart the gas compressor units.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Oxy is limited in the corrective actions to eliminate this type of cause and potential reoccurrence of flaring as notwithstanding proper gas compressor design and operation, various forms of mechanical or technical issues can be sudden, reasonably unforeseeable and unexpected which can cause compressor unit malfunctions to occur without warning or advance notice. 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 strong and positive compression equipment preventative maintenance program in place. The only actions that Oxy can take and handle that is within its control, is to keep continue with its compression equipment preventative maintenance

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ACKNOWLEDGMENTS

Action 100408

### **ACKNOWLEDGMENTS**

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P.O. Box 4294	Action Number:	
Houston, TX 772104294	100408	
	Action Type:	
	[C-129] Venting and/or Flaring (C-129)	

#### **ACKNOWLEDGMENTS**

V	I acknowledge that I am authorized to submit a Venting and/or Flaring (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.
V	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.
V	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.
V	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.
<u>~</u>	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 100408

## **CONDITIONS**

Operator:	OGRID:
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P.O. Box 4294	Action Number:
Houston, TX 772104294	100408
	Action Type:
	[C-129] Venting and/or Flaring (C-129)

#### CONDITIONS

Created By	Condition	Condition Date
marialuna2	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.	4/20/2022