

Field:

Station Name:

Certificate of Analysis

Number: 6030-20110087-001A

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

Nov. 17, 2020

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

NMSW
Corral Compressor Station 2 South
N/A
Sample Of:
Sample Of:
Sample Of:
Sample Date:
11/11/2020 01:09

Station Number: N/A Sample Date: 11/11/2020 01:09
Sample Point: N/A Sample Conditions: 1265 psig Ambient: 49 °F
Meter Number: Effective Date: 11/11/2020 01:09

County: Eddy Method: GPA 2286
Type of Sample: Spot-Cylinder Cylinder Cylinder No: 1111-001162

Heat Trace Used: N/A Instrument: 6030_GC2 (Agilent GC-7890B)

Sampling Method: Fill and Purge Last Inst. Cal.: 08/25/2020 8:12 AM

Sampling Company: OXY

Analyzed: 11/17/2020 12:40:16 by PGS

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	0.000	0.000	0.000		GPM TOTAL C2+	6.390
Nitrogen	1.332	1.320	1.675		GPM TOTAL C3+	3.359
Methane	76.899	76.201	55.381		GPM TOTAL iC5+	0.805
Carbon Dioxide	0.171	0.169	0.337			
Ethane	11.459	11.355	15.468	3.031		
Propane	5.781	5.728	11.443	1.575		
Iso-butane	0.846	0.838	2.207	0.274		
n-Butane	2.259	2.238	5.893	0.705		
Iso-pentane	0.642	0.636	2.079	0.232		
n-Pentane	0.766	0.759	2.481	0.275		
Hexanes Plus	0.763	0.756	3.036	0.298		
	100.918	100.000	100.000	6.390		
Calculated Physica	Calculated Physical Properties		otal	C6+		
Relative Density Rea	l Gas	0.70	649	3.0584		
Calculated Molecular	r Weight	22	.07	88.58		
Compressibility Factor		0.99	960			
GPA 2172 Calculati	on:					
Calculated Gross B	Calculated Gross BTU per ft³ @ 14.65 psia & 60°F					
Real Gas Dry BTU		1;	308	4763		
Water Sat. Gas Base BTU		12	285	4680		
Ideal, Gross HV - Dry at 14.65 psia		130	2.9	4763.5		
Ideal, Gross HV - We	Ideal, Gross HV - Wet		0.1	0.000		
Net BTU Dry Gas - re	Net BTU Dry Gas - real gas		188 167			
Net BTU Wet Gas - r	Net BTU Wet Gas - real gas					
O	:-I-I O t t O					

Comments: H2S Field Content 0 ppm

Hydrocarbon Laboratory Manager

The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality

assurance, unless otherwise stated.

Quality Assurance:



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Field: **NMSW** Station Name: Corral Compressor Station 2 South

Station Number: N/A Sample Point: N/A Meter Number:

County: Eddy Type of Sample: Spot-Cylinder

Heat Trace Used: N/A

Sampling Method: Fill and Purge

Nov. 17, 2020

Sampled By: Jesus Escobedo Sample Of: Gas Spot

Sample Date: 11/11/2020 01:09 Sample Conditions: 1265 psig

Method: **GPA 2286** Cylinder No: 1111-001162

Analyzed: 11/17/2020 13:21:28 by PGS

Sampling Company: OXY

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia			
Hydrogen Sulfide	NIL	NIL		GPM TOTAL C2+	6.390	
Nitrogen	1.320	1.675		GPM TOTAL C3+	3.359	
Methane	76.201	55.381		GPM TOTAL iC5+	0.805	
Carbon Dioxide	0.169	0.337				
Ethane	11.355	15.468	3.031			
Propane	5.728	11.443	1.575			
Iso-Butane	0.838	2.207	0.274			
n-Butane	2.238	5.893	0.705			
Iso-Pentane	0.636	2.079	0.232			
n-Pentane	0.759	2.481	0.275			
Hexanes	0.374	1.443	0.152			
Heptanes Plus	0.382	1.593	0.146			
	100.000	100.000	6.390			
Calculated Physica			Total	C7+		
Relative Density Rea	al Gas		0.7649	3.1738		
Calculated Molecula	r Weight		22.07	91.92		
Compressibility Fact	or		0.9960			
GPA 2172 Calculati						
Calculated Gross B	STU per ft ³ @	14.65 psi	a & 60°F			
Real Gas Dry BTU			1308	4850		
Water Sat. Gas Base BTU			1285	4766		
Ideal, Gross HV - Dry at 14.65 psia			1302.9	4850.4		
Ideal, Gross HV - We	Ideal, Gross HV - Wet			NIL		
Comments: H2S F	ield Content	0 ppm				

Hydrocarbon Laboratory Manager

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Field: NMSW

Station Name: Corral Compressor Station 2 South

Station Number: N/A Sample Point: N/A Meter Number:

County: Eddy

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Heat Trace Used: N/A

Sampling Method: Fill and Purge

Nov. 17, 2020

Sampled By: Jesus Escobedo Sample Of: Gas Spot

Sample Date: 11/11/2020 01:09

Sample Conditions: 1265 psig Method: GPA 2286 Cylinder No: 1111-001162

Analyzed: 11/17/2020 13:21:28 by PGS

Sampling Company: OXY

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Components	Mol. %	Wt. %	GPM at 14.65 psia			
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Methane	76.201	55.381				
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Iso-Butane	0.838	2.207	0.274			
n-Butane	2.238	5.893	0.705			
Iso-Pentane	0.636	2.079	0.232			
n-Pentane	0.759	2.481	0.275			
i-Hexanes	0.229	0.880	0.092			
n-Hexane	0.145	0.563	0.060			
Benzene	0.036	0.125	0.010			
Cyclohexane	0.091	0.348	0.031			
i-Heptanes	0.135	0.566	0.054			
n-Heptane	0.027	0.125	0.013			
Toluene	0.015	0.065	0.005			
i-Octanes	0.065	0.307	0.029			
n-Octane	0.003	0.015	0.001			
Ethylbenzene	0.001	0.002	NIL			
Xylenes	0.003	0.010	0.001			
i-Nonanes	0.005	0.025	0.002			
n-Nonane	0.001	0.003	NIL			
i-Decanes	NIL	NIL	NIL			
n-Decane	NIL	0.001	NIL			
Undecanes	NIL	0.001	NIL			
Dodecanes	NIL	NIL	NIL			
Tridecanes	NIL	NIL	NIL			
Tetradecanes Plus	NIL	NIL	_NIL			
	100.000	100.000	6.390			



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County: Eddy

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Heat Trace Used: N/A

Sampling Method: Fill and Purge

Sample Of: Jesus Escobedo
Sample Of: Gas Spot
Sample Date: 11/11/2020 01:09

Sample Conditions: 1265 psig Method: GPA 2286 Cylinder No: 1111-001162

Analyzed: 11/17/2020 13:21:28 by PGS

Sampling Company: OXY

Calculated Physical PropertiesTotalCalculated Molecular Weight22.073

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.65 psia & 60°FReal Gas Dry BTU1308.0Water Sat. Gas Base BTU1285.2Relative Density Real Gas0.7649Compressibility Factor0.9960

Comments: H2S Field Content 0 ppm

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Hydrocarbon Laboratory Manager

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Quality Assurance:

UPSET EVENT SPECIFIC JUSTIFICATIONS FORM

Facility: Corral 2S CS

Start Date: 06/10/2021 @ 12:30 PM **End Date:** 06/10/2021 @ 06:30 PM

Cause: Compressor Malfunction> Extreme Ambient Temperature

Duration of event: 6 hours **Total MCF:** 3454

Method of Flared Gas Measurement: Flare Meter

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

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 or prevented by good design, operation, and preventative maintenance practices. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown, 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. Oxy production techs must assess whether compressor unit shutdown is due to damage and repair is needed, or whether there are other reasons for its cause. In this case, Oxy production techs determined that the cause of all its compression equipment automatically shutting down at all three (3) compressor stations, were due to high discharge temperature malfunction alarms, that were triggered by the area's extreme scorching temperatures affecting the compression equipment. These without warning malfunctions were triggered by the combination of extremely high ambient temperatures and certain engine operating conditions (despite proper design and operation), that caused all three (3) facilities compression equipment to overheat, which prompted all of the compressor engine's sensors to abruptly shut down each of the units concurrently to avoid catastrophic damage to the internal engine components. The extreme scorching ambient temperatures caused the compression equipment to automatically shut down several times between 12:00 PM to 06:00 PM

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

Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown, 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. Oxy production techs must assess whether compressor unit shutdown is due to damage and repair is needed, or whether there are other reasons for its cause. In this case, Oxy production techs determined that the cause of all its compression equipment automatically shutting down at all three (3) compressor stations, were due to high discharge temperature malfunction alarms, that were triggered by the area's extreme scorching temperatures affecting the compression equipment. These without warning malfunctions were triggered by the combination of extremely high ambient temperatures and certain engine operating conditions (despite proper design and operation), that caused all three (3) facilities compression equipment to overheat, which prompted all of the compressor engine's sensors to abruptly shut down each of the units concurrently to avoid catastrophic damage to the internal engine components. Due to the increasing scorching ambient temperatures, exceeding 104 degrees, all three (3) facilities were experiencing repeat high discharge temperature malfunction alarms between the hours of 12:00 PM to 06:00

PM. Oxy production techs responded quickly to the malfunction alarms, and arrived on-site to the Corral 1S facility first, as this facility is unmanned and the techs had to travel from another facility. Upon arrival to this facility, an immediate visible inspection of the compression equipment did not provide any additional causes for the compression equipment to have malfunctioned, other than all the units were engaging in high discharge temperature alarms, brought on by the extreme scorching heat of the day temperatures affecting the units, causing them to run hotter and overheat. After immediately resetting the compression equipment's alarm, all of the compressors were restarted and returned to normal working operations. Afterwards, Oxy production techs drove to the Corral 2 North facility to perform the same corrective actions at that facility. Oxy production techs then drove over to the Corral 2S compressor station to perform the same corrective procedures. Oxy production techs stayed at the Corral 2S compressor station to monitor the compression equipment, given that the area's afternoon hot ambient temperatures were exceeding 104 degrees. Production techs were having to drive back and forth between all three (3) facilities to reset the malfunction alarms and restart compression equipment. Call was placed to the compressor equipment owner's, USA Compressor, who was short staffed at the time, and who informed the Oxy production tech that the heat was affecting equipment across the area, and the earliest a mechanic could be sent out, would be sometime in the next day or so. Therefore, Oxy production techs, who are trained to assess, scope out problems and resolve issues as quickly as possible, reset the alarm panels and attempted a restart of the facility's compression equipment. Oxy production techs remained on-site within all three facilities until they were assured that no further issues would occur with the compression equipment. All of the compression equipment was working normally and in good working operation prior to the malfunctions automatically shutting down the compression equipment. Though sudden and unexpected malfunctioning compressor issues occurred at Corral 1S and Corral 2N compressor stations, OXY routed the overflow of stranded gas to flare at Corral 2S compressor station in an effort to mitigate emissions for this event as the flare at this location can accommodate a higher volume of gas and as a safety measure effort to protect equipment, environment, and personnel.

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. It is OXY's policy to route all stranded sales gas to a flare during an unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of compressor malfunctions 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. As in this case, the combination of extremely high scorching ambient temperatures and certain engine operating conditions (despite proper design and operation), caused the facilities compression equipment to overheat, which triggered all of the compressor engine's sensors to abruptly shut down each of the units concurrently to avoid catastrophic damage to the internal engine components. Oxy production techs performed visual inspection of the compression equipment, at each of the respective facility, simply reset the alarm panels and restarted each of the compressor units back to normal working service during each automatic malfunction shutdown episode. 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. The only actions that Oxy can take and handle that is within its control, is to continue with its compression equipment preventative maintenance program for this facility's compression equipment.

Elsa predicted to regain tropical-storm force just off the Northeast Coast. Get the fore...

Elsa spares Tampa



Q Search Location

NOW	HOURLY	DAILY	RADAR	MINUTECAST	MONTHLY	AIR QUALITY
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June ∨ 20)21 ~					$DAILY \to$
S	М	Т	W	Т	F	S
30	31	1	2	3	4	5
84°	77°	80°	87°	84°	86°	96°
67°	63°	60°	60°	60°	59°	63°
6	7	8	9	10	11	12
99°	101°	103°	105°	108°	107°	100°
67°	66°	63°	66°	66°	67°	76°
13	14	15	16	17	18	19
99°	100°	95°	98°	96°	98°	99°
75°	72°	64°	70°	66°	63°	64°
20	21	22	23	24	25	26
107°	89°	96°	105°	101°	105°	100°
70°	72°	68°	71°	71°	77°	71°

Elsa predicted to regain tropical-storm force just off the Northeast Coast. Get the fore...

Elsa spares Tampa

Carlsbad, NM 88° F -

Q Search Location

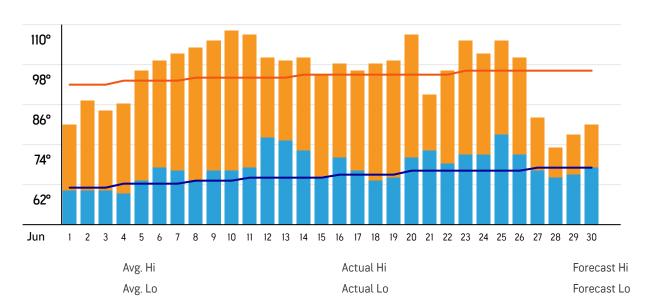
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TEMPERATURE GRAPH °F



<u>District I</u> 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**

QUESTIONS

Action 36427

QUESTIONS

Operator:	OGRID:
OXY USA INC	16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	36427
	Action Type:
	[C-129] Venting and/or Flaring (C-129)

QUESTIONS

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 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, major 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					
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				
Please provide the facility details, if the venting or flaring occurred or is occuring at a facility that does not have an Facility ID (f#) yet.				
Facility or Site Name Corral 2S Compressor Station				
Facility Type	Compressor Station - (CS)			

Equipment Involved	
Primary Equipment Involved	Other (Specify)
Additional details for Equipment Involved. Please specify	Emergency Flare>Compressor Malfunction> Extreme Ambient Temperature

Representative Compositional Analysis of Vented or Flared Natural Gas						
Please provide the mole percent for the percentage questions in this group.	Please provide the mole percent for the percentage questions in this group.					
Methane (CH4) percentage	76					
Nitrogen (N2) percentage, if greater than one percent	1					
Hydrogen Sulfide (H2S) PPM, rounded up	0					
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 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 or flaring was discovered or commenced	06/10/2021	
Time venting or flaring was discovered or commenced	12:00 PM	
Is the venting or flaring event complete	Yes	
Date venting or flaring was terminated	06/10/2021	
Time venting or flaring was terminated	06:00 PM	
Total duration of venting or flaring in hours, if venting or flaring has terminated	6	
Longest duration of cumulative hours within any 24-hour period during this event	6	

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Cause: Other Other (Specify) Natural Gas Flared Spilled: 3,454 Mcf Recovered: 0 Mcf Lost: 3,454 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 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	No
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

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	See Justification Form>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 or prevented by good design, operation, and preventative maintenance practices.
Steps taken to limit the duration and magnitude of venting or flaring	See Justification Form >As in this case, the combination of extremely high scorching ambient temperatures and certain engine operating conditions (despite proper design and operation), caused the facilities compression equipment to overheat, which triggered all of the compressor engine's sensors to abruptly shut down each of the units concurrently to avoid catastrophic damage to the internal engine components. Oxy production techs performed visual inspection of the compression equipment, at each of the respective facility, simply reset the alarm panels and restarted each of the compressor units back to normal working service during each automatic malfunction shutdown episode.
Corrective actions taken to eliminate the cause and reoccurrence of venting or flaring	See Justification Form >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 nhave been avoided by good design, operation, and preventative maintenance practices. It is OXY's policy to route all stranded sales gas to a flare during an unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of compressor malfunctions 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. As in this case, the combination of extremely high scorching ambient temperatures and certain engine operating conditions (despite proper design and operation), caused the facilities compression equipment to overheat, which triggered all of the compressor engine's sensors to abruptly shut down each of the units concurrently to avoid catastrophic damage to the internal engine components. Oxy production techs performed visual inspection of the compression equipment, at each of the respective facility, simply reset the alarm panels and restarted each of the compressor units back to normal working service during each automatic malfunction shutdown episode. 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. The only actions that Oxy can take and handle that is within its control, is to continue with its compression equipment.

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P.O. Box 4294	Action Number:
Houston, TX 772104294	36427
	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.	7/14/2021