

Certificate of Analysis

Number: 6030-20110087-001A

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

Nov. 17, 2020

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 Sampling Company:OXY

Sampled By: Jesus Escobedo Sample Of: Gas Spot Sample Date: 11/11/2020 01:09 Sample Conditions: 1265 psig Ambient: 49 °F 11/11/2020 01:09 Effective Date: GPA 2286 Method: Cylinder No: 1111-001162 Instrument: 6030\_GC2 (Agilent GC-7890B) Last Inst. Cal.: 08/25/2020 8:12 AM Analyzed: 11/17/2020 12:40:16 by PGS

#### Analytical Data

Components l	Jn-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 Physical Pre	operties	Тс	otal	C6+		
Relative Density Real Ga	as	0.76	649	3.0584		
Calculated Molecular We	eight	22	.07	88.58		
Compressibility Factor	·	0.99	960			
GPA 2172 Calculation:						
Calculated Gross BTU	per ft <sup>3</sup> @ 14.65 p	sia & 60°F				
Real Gas Dry BTU		13	308	4763		
Water Sat. Gas Base BT	U	12	285	4680		
Ideal, Gross HV - Dry at	14.65 psia	130	2.9	4763.5		
Ideal, Gross HV - Wet		128	0.1	0.000		
Net BTU Dry Gas - real g	gas	11	188			
Net BTU Wet Gas - real	gas	11	167			

Comments: H2S Field Content 0 ppm

Hydrocarbon Laboratory Manager

Quality Assurance:

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



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Field:NMSWStation Name:Corral Compressor Station 2 SouthStation Number:N/ASample Point:N/AMeter Number:EddyCounty:EddyType of Sample:Spot-CylinderHeat Trace Used:N/ASampling Method: Fill and Purge

Sampled By:	Jesus Esc	obedo
Sample Of:	Gas	Spot
Sample Date:	11/11/2020	0 01:09
Sample Conditions:	1265 psig	
Method:	GPA 2286	
Cylinder No:	1111-0011	62
Analyzed:	11/17/2020	0 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	al Properties		Total	C7+		
Relative Density Re	al Gas		0.7649	3.1738		
Calculated Molecula			22.07	91.92		
Compressibility Fact	tor		0.9960			
<b>GPA 2172 Calculat</b>	ion:					
<b>Calculated Gross E</b>	BTU per ft <sup>3</sup> @	2 14.65 psi	a & 60°F			
Real Gas Dry BTU	-	-	1308	4850		
Water Sat. Gas Bas	e BTU		1285	4766		
Ideal, Gross HV - Dr	ry at 14.65 ps	sia	1302.9	4850.4		
Ideal, Gross HV - W			1280.1	NIL		
• • • • • • •		~				

Comments: H2S Field Content 0 ppm

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Sampled By:Jesus EscobedoSample Of:GasSpotSample Date:11/11/2020 01:09Sample Conditions:1265 psigMethod:GPA 2286Cylinder No:1111-001162Analyzed:11/17/2020 13:21:28 by PGSSampling 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				
Methane	76.201	55.381				
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			
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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Sampled By:Jesus EscobedoSample Of:GasSpotSample Date:11/11/2020 01:09Sample Conditions:1265 psigMethod:GPA 2286Cylinder No:1111-001162Analyzed:11/17/2020 13:21:28 by PGSSampling Company:OXY

Calculated Physical Properties	Total
Calculated Molecular Weight	22.073
GPA 2172 Calculation:	
Calculated Gross BTU per ft <sup>3</sup> @ 14.65 ps	sia & 60°F
Real Gas Dry BTU	1308.0
Water Sat. Gas Base BTU	1285.2
Relative Density Real Gas	0.7649
Compressibility Factor	0.9960
<b>Comments:</b> H2S Field Content 0 ppm	

Quality Assurance:

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

Hydrocarbon Laboratory Manager

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

Facility: Corral 2S CS	Date: 09/07/2021
Duration of event: 2 Hours 30 minutes	MCF Flared: 2513
Start Time: 07:30 AM	End Time: 10:00 AM

Cause: Downstream Activity > Enterprise > Enterprise Gas Pipeline Shut In > ESD valve

#### Method of Flared Gas Measurement: Gas Flare Meter

#### Well API Associated with Facility: 30-015-44507 Corral Fly 02 01 State #021H

**Comments:** This upset event was not caused by any wells associated with the facility. This emissions event was caused by the unforeseen, unexpected, sudden, and unavoidable interruption, restriction or complete shut-in of a gas pipeline by a third-party pipeline operator, which impacted Oxy's ability to send gas to a third-party gas pipeline. This interruption, restriction or complete shut-in of the gas pipeline by a third-party pipeline operator is downstream of Oxy's custody transfer point and out of Oxy's control to avoid or prevent from happening and did not stem from any of Oxy's upstream facility activity that could have been foreseen and avoided, and could not have been avoided by good design, operation, and preventative maintenance practices.

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

Oxy personnel are in the field 24/7 and can physically see when its facility is flaring. which in turn, is communicated to additional Oxy field personnel to resolve. 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. Internal OXY procedures ensure that upon gas compressor unit and/or multiple unit shutdown, increased pipeline pressure sensor 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, it was determined that a high pipeline pressure spike in Enterprise's gas system pipeline, prompted its pipeline ESD valve to close, which restricted Oxy's ability to send its gas into the Enterprise gas system pipeline, therefore, causing Oxy to send its gas to flare. Until Enterprise was able to resolve their downstream activity issues regarding the high pipeline pressure and its ESD valve closure, Oxy reluctantly routed its gas to flare until Enterprise resumed normal working service and Oxy was able to begin sending gas again. No advance warning was provided to Oxy personnel from Enterprise personnel regarding issues with their gas system pipeline.

#### 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. This facility is unmanned, except when Oxy production techs are gathering data daily or conducting daily walk-throughs to ensure that there are no problems, circumstances and/or assist other personnel on-site for maintenance purposes. In this case, the increased spike in Enterprise's pipeline pressure forced Oxy's upstream facility to

route all its stranded gas to a flare, as it was not able to push all its gas into Enterprises' gas pipeline due to the restrictions of gas flow placed on the pipeline, caused by the closure of Enterprise's pipeline ESD valve, which was triggered by the high pipeline pressure spike.

Oxy production techs, immediately upon receiving high pressure line alarms, arrived at the facility and began inspecting the equipment and contacting Enterprise personnel to determine cause of the spike in the pipeline pressure. In addition, Oxy production techs noticed that the Enterprise pipeline ESD valve was closed, and again contacted Enterprise personnel to inform them a technician needed to be sent to reset their pipeline ESD valve so that it would be open and Oxy could be able to send it gas to Enterprise's downstream facility. Flaring ceased when Enterprise was able to bring their gas pipeline pressure down and their technician re-opened their pipeline ESD valve so that Oxy's sales gas could get into their gas system pipeline.

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

Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of an Enterprise gas flow pipeline restriction, constraint or shut-in, due to high pipeline pressure spikes in their gas system pipeline, as this control issue is downstream of Oxy's custody transfer point and out of Oxy's control to avoid or prevent from happening or reoccurring. Enterprise's downstream facility and equipment issues will re-occur from time to time and may trigger a spike in their gas pipeline pressure, which in turn, directly impacts Oxy's ability to send gas to them. When Enterprise's downstream facilities and/or equipment has issues or greatly struggles to handle the volume of gas being sent to them by Oxy, Enterprise then restricts Oxy's ability to send gas, which then allows no other option but for Oxy to route all its stranded gas not pushed into the Enterprise gas system pipeline, to flare. OXY makes every effort to control and minimize emissions as much as possible. The only actions that Oxy can take and handle that is within its control, is to communicate frequently with Enterprise personnel during these types of situations and continually monitor the Enterprise gas pipeline pressure in order to make necessary adjustments to Oxy's own compression equipment, when warranted, until Enterprise's gas system pipeline is returned to normal working service.

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

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Action 50719

QUESTIONS

Operator: OXY USA INC		OGRID: 16696
P.O. Box 4294		Action Number:
Houston, TX 772104294		50719
		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	-	· ·
Incident Well	[30-015-44507] CORRAL FL	Y 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 a	nd 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 venting and/or flaring event	Yes, major venting and/or	flaring of natural gas.
An appropriate shall fill a form C 111 instead of a form C 100 for a minute that include it is in the		
An operator shall file a form C-141 instead of a form C-129 for a release that, includes liquid during v	renung and/or tiaring 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 <b>ANY</b> liquids (not fully and/or completely flared) that reached (or has a chance of reaching) the ground, a	Νο	
surface, a watercourse, or otherwise, with reasonable probability, endanger public health, the environment or fresh water		
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)	
		ream Activity > Enterprise > Enterprise Gas Pipeline Shut In >
Additional details for Equipment Involved. Please specify	ESD valve	
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	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 spec		
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	09/07/2021	
Time venting and/or flaring was discovered or commenced	07:30 AM	
Time venting and/or flaring was terminated	10:00 AM	
Cumulative hours during this event	2	
Measured or Estimated Volume of Vented or Flared Natural Gas		

Natural Gas Vented (Mcf) Details

### *Received by OCD: 9/21/2021 1:38:51 PM*

Natural Gas Flared (Mcf) Details	Cause: Other   Other (Specify)   Natural Gas Flared   Released: 2,513 Mcf   Recovered: 0 Mcf   Lost: 2,513 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 or is this venting and/or flaring a result of downstream activity	Yes	
Was notification of downstream activity received by you or your operator	No	
Downstream OGRID that should have notified you or your operator	[287533] ENTERPRISE CRUDE PIPELINE LLC	
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	See Justification Form > In this case, it was determined that a high pipeline pressure spike in Enterprise's gas system pipeline, prompted its pipeline ESD valve to close, which restricted Oxy's ability to send its gas into the Enterprise gas system pipeline, therefore, causing Oxy to send its gas to flare. Until Enterprise was able to resolve their downstream activity issues regarding the high pipeline pressure and its ESD valve closure, Oxy reluctantly routed its gas to flare until Enterprise resumed normal working service and Oxy was able to begin sending gas again. No advance warning or notice was provided to Oxy personnel from Enterprise personnel regarding downstream activity issues with their gas system pipeline.
Steps taken to limit the duration and magnitude of venting and/or flaring	See Justification Form >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. This facility is unmanned, except when Oxy production techs are gathering data daily or conducting daily walk-throughs to ensure that there are no problems, circumstances and/or assist other personnel on-site for maintenance purposes. In this case, the increased spike in Enterprise's pipeline pressure forced Oxy's upstream facility to route all its stranded gas to a flare, as it was not able to push all its gas into Enterprises' gas pipeline due to the restrictions of gas flow placed on the pipeline, caused by the closure of Enterprise's pipeline ESD valve, which was triggered by the high pipeline pressure spike.
Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring	See Justification Form >Oxy cannot take any corrective actions to eliminate the cause and potential reoccurrence of an Enterprise gas flow pipeline restriction, constraint or shut-in, due to high pipeline pressure spikes in their gas system pipeline, as this control issue is downstream of Oxy's custody transfer point and out of Oxy's control to avoid or prevent from happening or reoccurring. Enterprise's downstream facility and equipment issues will reoccur from time to time and may trigger a spike in their gas pipeline pressure, which in turn, directly impacts Oxy's ability to send gas to them. When Enterprise's downstream facilities and/or equipment has issues or greatly struggles to handle the volume of gas being sent to them by Oxy, Enterprise then restricts Oxy's ability to send gas, which then allows no other option but for Oxy to route all its stranded gas not pushed into the Enterprise gas system pipeline, to flare. OXY makes every effort to control and minimize emissions as much as possible. The only actions that Oxy can take and handle that is within its control, is to communicate frequently with Enterprise personnel during these types of situations and continually monitor the Enterprise gas pipeline pressure in order to make necessary adjustments to Oxy's own compression equipment, when warranted, until Enterprise's gas system pipeline is returned to normal working service.

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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

CONDITIONS

Operator:	OGRID:
OXY USA INC	16696
P.O. Box 4294	Action Number:
Houston, TX 772104294	50719
	Action Type:
	[C-129] Venting and/or Flaring (C-129)

#### CONDITIONS

Created By	Condition	Condition Date
marialuna	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.	9/21/2021

CONDITIONS

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Action 50719