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Analytical Report

2/10/2023

Customer:	Occidental Permian Ltd.	Order:	503-4218
Location:	North Hobbs Unit	Received:	2/9/2023
Description:	Samples from Central Tank, North, and West Batteries for Hydrocarbon Analyses	Primary Contact:	Chris Poe

REPORT DISTRIBUTION:

Chris Poe , Richard Sanders

All data reported in this Analytical Report is in compliance with the test method(s) performed as of the date noted above. The validity and integrity of this report will remain intact as long as it is accompanied by this page and reproduced in full. Any datafile (e.g. txt, csv, etc.) produced which is associated with the results in this report shall be considered for convenience only and does not supersede this report as the official test results. We reserve the right to return to you any unused samples received if we consider so necessary (e.g. samples identified as hazardous waste).

We appreciate you choosing Pantechs Laboratories. If you have any questions concerning this report, please feel free to contact us at any time.

Pantechs Laboratories, Inc.
Order: 503-4218 Order Date: 2/9/2023
Order Description: North Hobbs Unit, Samples from Central Tank, North, and West Batteries for Hydrocarbon Analyses

Sample List						
Fluid	Operator	Location	Site	Sample Point	Date	Time
Gas	Occidental Permian Ltd.	North Hobbs Unit	Central Tank Battery	Gas Leg of Production Separator	2/9/2023	3:41 PM
Gas	Occidental Permian Ltd.	North Hobbs Unit	North Injection Battery	Gas Leg of Production Separator	2/9/2023	3:31 PM
Gas	Occidental Permian Ltd.	North Hobbs Unit	West Injection Battery	Gas Leg of Production Separator	2/9/2023	4:04 PM
Gas	Occidental Permian Ltd.	South Hobbs Unit	Central Tank Battery	Gas Leg of Production Separator	2/9/2023	3:11 PM

No Sample List				
Operator	Location	Site	Sample Point	Comment

Pantechs Laboratories, Inc. - Order: 503-4218 - Order Date: 2/9/2023
Order Description: North Hobbs Unit, Samples from Central Tank, North, and West Batteries for Hydrocarbon Analyses

SAMPLE ID		COLLECTION DATA	
Operator	Occidental Permian Ltd.	Pressure	26 psig
Location	North Hobbs Unit	Sample Temp	N/A
Site	Central Tank Battery	Atm Temp	45 F
Site Type	Battery	Collection Date	02/09/2023
Sample Point	Gas Leg of Production Separator	Collection Time	3:41 PM
Spot/Comp	Spot	Collection By	Cody Carson
Meter ID		Pressure Base	14.650 psi
Purchaser		Temperature Base	60 F
Fluid	Gas	Container(s)	PL2344

GPA 2261 Gas Fractional Analysis with Water Vapor

COMPOUND	FORMULA	MOL%	WT%	GPM
NITROGEN	N2	0.056	0.033	0.006
CARBON DIOXIDE	CO2	80.489	74.605	13.780
HYDROGEN SULFIDE	H2S	1.281	0.919	0.173
WATER VAPOR	H2O	0.555	0.211	0.032
METHANE	C1	0.484	0.164	0.082
ETHANE	C2	0.391	0.248	0.105
PROPANE	C3	2.653	2.464	0.734
I-BUTANE	iC4	1.657	2.028	0.545
N-BUTANE	nC4	4.715	5.772	1.493
I-PENTANE	iC5	2.289	3.478	0.842
N-PENTANE	nC5	1.769	2.688	0.644
HEXANES PLUS	C6+	3.661	7.390	1.579
TOTALS:		100.000	100.000	20.015

Value of "0.000" in fractional interpreted as below detectable limit.
If Onsite H2S testing is performed, its resulting value is used in fractional table

GPA 2172/ASTM D3588 CALCULATED PROPERTIES

WATER CONTENT	BTU/CF	Specific Gr.	Z Factor	Mol Weight	Wobbe IDX
DRY	652.96	1.652	0.990	47.381	508.07
MEASURED WATER	653.42	1.656	0.990	47.481	

Water Vapor

GPM	PPMM	LBS/MMSCF	SAMPLE SATURATED
0.032	5,550.000	264.286	No

Onsite Testing by Stain Tube

METHOD</

Order Description: North Hobbs Unit, Samples from Central Tank, North, and West Batteries for Hydrocarbon Analyses

SAMPLE ID		COLLECTION DATA	
Operator	Occidental Permian Ltd.	Pressure	34 psig
Location	North Hobbs Unit	Sample Temp	N/A
Site	North Injection Battery	Atm Temp	45 F
Site Type	Battery	Collection Date	02/09/2023
Sample Point	Gas Leg of Production Separator	Collection Time	3:31 PM
Spot/Comp	Spot	Collection By	Cody Carson
Meter ID		Pressure Base	14.650 psi
Purchaser		Temperature Base	60 F
Fluid	Gas	Container(s)	PL1003

GPA 2261 Gas Fractional Analysis with Water Vapor

COMPOUND	FORMULA	MOL%	WT%	GPM
NITROGEN	N2	0.065	0.041	0.007
CARBON DIOXIDE	CO2	94.461	92.516	16.121
HYDROGEN SULFIDE	H2S	0.214	0.162	0.029
WATER VAPOR	H2O	0.540	0.216	0.031
METHANE	C1	0.083	0.030	0.014
ETHANE	C2	0.132	0.088	0.035
PROPANE	C3	0.839	0.823	0.231
I-BUTANE	iC4	0.397	0.514	0.130
N-BUTANE	nC4	1.096	1.418	0.346
I-PENTANE	iC5	0.452	0.726	0.166
N-PENTANE	nC5	0.388	0.623	0.141
HEXANES PLUS	C6+	1.333	2.843	0.573
TOTALS:		100.000	100.000	17.824

Value of "0.000" in fractional interpreted as below detectable limit.

If Onsite H2S testing is performed, its resulting value is used in fractional table

GPA 2172/ASTM D3588 CALCULATED PROPERTIES

WATER CONTENT	BTU/CF	Specific Gr.	Z Factor	Mol Weight	Wobbe IDX
DRY	178.36	1.558	0.993	44.838	142.89
MEASURED WATER	178.67	1.562	0.993	44.935	

Water Vapor

GPM	PP
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Order Description: North Hobbs Unit, Samples from Central Tank, North, and West Batteries for Hydrocarbon Analyses

SAMPLE ID		COLLECTION DATA	
Operator	Occidental Permian Ltd.	Pressure	28 psig
Location	North Hobbs Unit	Sample Temp	N/A
Site	West Injection Battery	Atm Temp	40 F
Site Type	Battery	Collection Date	02/09/2023
Sample Point	Gas Leg of Production Separator	Collection Time	4:04 PM
Spot/Comp	Spot	Collection By	Cody Carson
Meter ID		Pressure Base	14.650 psi
Purchaser		Temperature Base	60 F
Fluid	Gas	Container(s)	PL0245

GPA 2261 Gas Fractional Analysis with Water Vapor

COMPOUND	FORMULA	MOL%	WT%	GPM
NITROGEN	N2	0.048	0.030	0.005
CARBON DIOXIDE	CO2	93.595	92.306	15.972
HYDROGEN SULFIDE	H2S	1.480	1.130	0.200
WATER VAPOR	H2O	0.511	0.206	0.029
METHANE	C1	0.487	0.175	0.083
ETHANE	C2	0.185	0.125	0.050
PROPANE	C3	0.623	0.616	0.172
I-BUTANE	iC4	0.219	0.285	0.072
N-BUTANE	nC4	0.645	0.840	0.204
I-PENTANE	iC5	0.435	0.703	0.159
N-PENTANE	nC5	0.417	0.674	0.151
HEXANES PLUS	C6+	1.355	2.910	0.582
TOTALS:		100.000	100.000	17.679

Value of "0.000" in fractional interpreted as below detectable limit.

If Onsite H2S testing is performed, its resulting value is used in fractional table

GPA 2172/ASTM D3588 CALCULATED PROPERTIES

WATER CONTENT	BTU/CF	Specific Gr.	Z Factor	Mol Weight	Wobbe IDX
DRY	167.09	1.547	0.993	44.533	134.32
MEASURED WATER	167.38	1.551	0.993	44.625	

Water Vapor

GPM	PPMM	LBS/MMSCF	SAMPLE SATURATED
0.			

Order Description: North Hobbs Unit, Samples from Central Tank, North, and West Batteries for Hydrocarbon Analyses

SAMPLE ID		COLLECTION DATA	
Operator	Occidental Permian Ltd.	Pressure	27 psig
Location	South Hobbs Unit	Sample Temp	N/A
Site	Central Tank Battery	Atm Temp	50 F
Site Type	Battery	Collection Date	02/09/2023
Sample Point	Gas Leg of Production Separator	Collection Time	3:11 PM
Spot/Comp	Spot	Collection By	Cody Carson
Meter ID		Pressure Base	14.650 psi
Purchaser		Temperature Base	60 F
Fluid	Gas	Container(s)	PL2332

GPA 2261 Gas Fractional Analysis with Water Vapor

COMPOUND	FORMULA	MOL%	WT%	GPM
NITROGEN	N2	0.056	0.033	0.006
CARBON DIOXIDE	CO2	80.302	74.480	13.748
HYDROGEN SULFIDE	H2S	1.509	1.084	0.204
WATER VAPOR	H2O	0.553	0.210	0.032
METHANE	C1	0.483	0.163	0.082
ETHANE	C2	0.390	0.247	0.105
PROPANE	C3	2.647	2.460	0.733
I-BUTANE	iC4	1.653	2.025	0.543
N-BUTANE	nC4	4.705	5.763	1.490
I-PENTANE	iC5	2.284	3.473	0.840
N-PENTANE	nC5	1.765	2.684	0.642
HEXANES PLUS	C6+	3.653	7.378	1.575
TOTALS:		100.000	100.000	20.000

Value of "0.000" in fractional interpreted as below detectable limit.

If Onsite H2S testing is performed, its resulting value is used in fractional table

GPA 2172/ASTM D3588 CALCULATED PROPERTIES

WATER CONTENT	BTU/CF	Specific Gr.	Z Factor	Mol Weight	Wobbe IDX
DRY	653.00	1.651	0.990	47.351	508.26
MEASURED WATER	653.46	1.655	0.990	47.450	

Water Vapor

GPM	PPMM	LBS/MMSCF	SAMPLE SATURATED
0.032	5,530.000		

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CO2 %	81.28%		
HC%	18.72%		
Flare Volume	230 mscfd		
HC Volume	59 mscfd	NHU CTB	80.94
CO2 Volume	186.944 mscfd	SHU CTB	81.28
		NHU WIB	93.595
		NHU NIB	94.461
		SHU RCF	87.31
		NHU RCF	88.02
		South Indian Basin CMPR STA	
		NDU	88.019

0.446

1	Reason why this event was beyond Operator's control:
	Oxy engages in respectable and good facility operation practices while also maintaining its continuous equipment preventative maintenance program. Internal OXY procedures ensure that upon a gas compressor unit shutdown, production techs are promptly notified via an equipment alarm notification app and are trained to respond immediately in order to assess the issue as soon as possible, so that prompt corrective actions are taken to minimize emissions. Oxy production techs must assess whether a gas compressor unit shutdown is due to damage and repair is needed, or whether there are other reasons for its cause. In this case, this facility is an unmanned location and therefore, the Oxy production tech, upon receiving the malfunction alarm for the South Hobbs Unit CTB, quickly drove to the facility from another distant facility location. Upon the production tech's arrival, the immediate steps taken was to check the lube oil level and inspect the unit for additional potential issues. The Oxy production tech determined that the cause of the Gas Sales compressor was due to the cooler fan louver control didn't open the louvers causing the compressor to go down on high discharge after cooler temperature. This is an automated controller and failed to work like it was supposed too .

2	Steps Taken to limit duration and magnitude of venting or flaring:
	It is OXY's policy to route all stranded sales gas to a flare during a sudden, unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. The flare is regularly monitored to the ensure flame is lit and meeting opacity requirements. In this case, Operations Immediately dispatched PTs to stop what they were doing to go get this compressor back online .After troubleshooting the unit the PT Made adjustments to the louver controller and monitored to make sure it was working correctly

3	Corrective Actions taken to eliminate the cause and reoccurrence of venting or flaring:
	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. It is OXY's policy to route all stranded sales gas to a flare during a sudden, unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. The flare is regularly monitored to the ensure flame is lit and meeting opacity requirements. Oxy is limited in the corrective actions available to them to eliminate the cause and potential reoccurrence of compressor malfunctions as notwithstanding compressor engine design and operation, compressors are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause compression malfunctions to occur, thereby, triggering the unit's sensors to automatically shut down the unit to avoid catastrophic damage to the internal engine components. 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 Toromont compressor unit was working as designed and operated normally prior to the sudden and without warning automatic shutdown of the compressor unit. Oxy has a strong and positive compression equipment preventative maintenance program in place.

Sante Fe Main Office
Phone: (505) 476-3441

General Information
Phone: (505) 629-6116

Online Phone Directory
<https://www.emnrd.nm.gov/ocd/contact-us>

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

DEFINITIONS

Action 405590

DEFINITIONS

Operator: OCCIDENTAL PERMIAN LTD P.O. Box 4294 Houston, TX 772104294	OGRID: 157984
	Action Number: 405590
	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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QUESTIONS

Action 405590

QUESTIONS

Operator: OCCIDENTAL PERMIAN LTD P.O. Box 4294 Houston, TX 772104294	OGRID: 157984
	Action Number: 405590
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Prerequisites <i>Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.</i>	
Incident Well	Unavailable.
Incident Facility	[fJXK1520829861] South Hobbs Unit CTB

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 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.
<i>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.</i>	
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 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 vent or flare within an incorporated municipal boundary or within 300 feet from an occupied permanent residence, school, hospital, institution or church in existence	No

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	0
Nitrogen (N2) percentage, if greater than one percent	0
Hydrogen Sulfide (H2S) PPM, rounded up	15,090
Carbon Dioxide (CO2) percentage, if greater than one percent	80
Oxygen (O2) percentage, if greater than one percent	0
<i>If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.</i>	
Methane (CH4) percentage quality requirement	Not answered.
Nitrogen (N2) percentage quality requirement	Not answered.
Hydrogen Sulfide (H2S) PPM quality requirement	Not answered.</

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QUESTIONS, Page 2

Action 405590

QUESTIONS (continued)

Operator: OCCIDENTAL PERMIAN LTD P.O. Box 4294 Houston, TX 772104294	OGRID: 157984
	Action Number: 405590
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	11/15/2024
Time vent or flare was discovered or commenced	01:48 AM
Time vent or flare was terminated	02:24 AM
Cumulative hours 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: Equipment Failure Production Tank Natural Gas Flared Released: 59 Mcf Recovered: 0 Mcf Lost: 59 Mcf.
Other Released Details	Cause: Equipment Failure Producing Well Carbon Dioxide Released: 186 Mcf Recovered: 0 Mcf Lost: 186 Mcf.
Additional details for Measured or Estimated Volume(s). Please specify	Not answered.
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 event and it was beyond this operator's control.	True
Please explain reason for why this event was beyond this operator's control	Oxy engages in respectable and good facility operation practices while also maintaining its continuous equipment preventative maintenance program. Internal OXY procedures ensure that upon a gas compressor unit shutdown, production techs are promptly notified via an equipment alarm notification app and are trained to respond immediately in order to assess the issue as soon as possible, so that prompt corrective actions are taken to minimize emissions. Oxy production techs must assess whether a gas compressor unit shutdown is due to damage and repair is needed, or whether there are other reasons for its cause. In this case, this facility is an unmanned location and therefore, the Oxy production tech, upon receiving the malfunction alarm for the South Hobbs Unit CTB, quickly drove to the facility from another distant facility location. Upon the production tech's arrival, the immediate steps taken was to check the lube oil level and inspect the unit for

	stop what they were doing to go get this compressor back online .After troubleshooting the unit the PT Made adjustments to the louver controller and monitored to make sure it was working correctly
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	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. It is OXY's policy to route all stranded sales gas to a flare during a sudden, unforeseen and unavoidable emergency or malfunction, in order to minimize emissions as much as possible. The flare at this facility has a 98% combustion efficiency in order to lessen emissions as much as possible. The flare is regularly monitored to the ensure flame is lit and meeting opacity requirements. Oxy is limited in the corrective actions available to them to eliminate the cause and potential reoccurrence of compressor malfunctions as notwithstanding compressor engine design and operation, compressors are inherently dynamic and even the smallest alarms, false or true, can be sudden, reasonably unforeseeable and unexpected which can cause compression malfunctions to occur, thereby, triggering the unit's sensors to automatically shut down the unit to avoid catastrophic damage to the internal engine components. 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 Toromont compressor unit was working as designed and operated normally prior to the sudden and without warning automatic shutdown of the compressor unit. Oxy has a strong and positive compression equipment preventative maintenance program in place.

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ACKNOWLEDGMENTS

Action 405590

ACKNOWLEDGMENTS

Operator: OCCIDENTAL PERMIAN LTD P.O. Box 4294 Houston, TX 772104294	OGRID: 157984
	Action Number: 405590
	Action Type: [C-129] Venting and/or Flaring (C-129)

ACKNOWLEDGMENTS

☒	I acknowledge that I am authorized to submit a <i>Venting and/or Flaring</i> (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.
☒	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.
☒	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.
☒	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.
☒	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 405590

CONDITIONS

Operator: OCCIDENTAL PERMIAN LTD P.O. Box 4294 Houston, TX 772104294	OGRID: 157984
	Action Number: 405590
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
srojas	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.	11/21/2024