

March 11, 2024

**FESCO, Ltd.**  
**1100 Fesco Ave. - Alice, Texas 78332**

**For:** Marathon Oil Permian, LLC  
990 Town and Country Blvd.  
Houston, Texas 77024-2217

**Sample:** Cass 16 State 4H  
First Stage Separator  
Spot Gas Sample @ 129 psig & 76 °F

Date Sampled: 03/02/2024

Job Number: 241633.001

**CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286**

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	1.284	
Carbon Dioxide	0.498	
Methane	79.046	
Ethane	10.644	2.913
Propane	5.051	1.424
Isobutane	0.652	0.218
n-Butane	1.511	0.488
2-2 Dimethylpropane	0.006	0.002
Isopentane	0.341	0.128
n-Pentane	0.364	0.135
Hexanes	0.255	0.108
Heptanes Plus	0.348	0.139
Totals	100.000	5.555

**Computed Real Characteristics Of Heptanes Plus:**

Specific Gravity ----- 3.273 (Air=1)  
Molecular Weight ----- 94.46  
Gross Heating Value ----- 5063 BTU/CF

**Computed Real Characteristics Of Total Sample:**

Specific Gravity ----- 0.728 (Air=1)  
Compressibility (Z) ----- 0.9964  
Molecular Weight ----- 21.01  
Gross Heating Value  
Dry Basis ----- 1275 BTU/CF  
Saturated Basis ----- 1253 BTU/CF

\*Hydrogen Sulfide tested on location by: Stain Tube Method (GPA 2377)  
Results: 0.079 Gr/100 CF, 1.3 PPMV or 0.0001 Mol%

Base Conditions: 15.025 PSI &amp; 60 Deg F

Sampled By: (16) D. Field  
Analyst: LG  
Processor: DS  
Cylinder ID: T-5114

Certified: FESCO, Ltd. - Alice, Texas

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Conan Pierce 361-661-7015

FESCO, Ltd.

Job Number: 241633.001

**CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286  
TOTAL REPORT**

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	1.284		1.712
Carbon Dioxide	0.498		1.043
Methane	79.046		60.371
Ethane	10.644	2.913	15.236
Propane	5.051	1.424	10.603
Isobutane	0.652	0.218	1.804
n-Butane	1.511	0.488	4.181
2,2 Dimethylpropane	0.006	0.002	0.021
Isopentane	0.341	0.128	1.171
n-Pentane	0.364	0.135	1.250
2,2 Dimethylbutane	0.004	0.002	0.016
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.028	0.012	0.115
2 Methylpentane	0.081	0.034	0.332
3 Methylpentane	0.042	0.018	0.172
n-Hexane	0.100	0.042	0.410
Methylcyclopentane	0.044	0.016	0.176
Benzene	0.042	0.012	0.156
Cyclohexane	0.062	0.022	0.248
2-Methylhexane	0.012	0.006	0.057
3-Methylhexane	0.013	0.006	0.062
2,2,4 Trimethylpentane	0.007	0.004	0.038
Other C7's	0.026	0.012	0.123
n-Heptane	0.025	0.012	0.119
Methylcyclohexane	0.040	0.016	0.187
Toluene	0.025	0.009	0.110
Other C8's	0.024	0.011	0.126
n-Octane	0.007	0.004	0.038
Ethylbenzene	0.001	0.000	0.005
M & P Xylenes	0.005	0.002	0.025
O-Xylene	0.001	0.000	0.005
Other C9's	0.007	0.004	0.042
n-Nonane	0.002	0.001	0.012
Other C10's	0.003	0.002	0.020
n-Decane	0.001	0.001	0.007
Undecanes (11)	<u>0.001</u>	<u>0.001</u>	<u>0.007</u>
Totals	100.000	5.555	100.000

Computed Real Characteristics of Total Sample

Specific Gravity -----	0.728	(Air=1)
Compressibility (Z) -----	0.9964	
Molecular Weight -----	21.01	
Gross Heating Value		
Dry Basis -----	1275	BTU/CF
Saturated Basis -----	1253	BTU/CF

March 11, 2024

**FESCO, Ltd.**  
**1100 Fesco Ave. - Alice, Texas 78332**

**Sample:** Cass 16 State 4H  
 First Stage Separator  
 Spot Gas Sample @ 129 psig & 76 °F

Date Sampled: 03/02/2024

Job Number: 241633.001

**GLYCALC FORMAT**

<b>COMPONENT</b>	<b>MOL%</b>	<b>GPM</b>	<b>Wt %</b>
Carbon Dioxide	0.498		1.043
Hydrogen Sulfide	< 0.001		< 0.001
Nitrogen	1.284		1.712
Methane	79.046		60.371
Ethane	10.644	2.913	15.236
Propane	5.051	1.424	10.603
Isobutane	0.652	0.218	1.804
n-Butane	1.517	0.490	4.202
Isopentane	0.341	0.128	1.171
n-Pentane	0.364	0.135	1.250
Cyclopentane	0.000	0.000	0.000
n-Hexane	0.100	0.042	0.410
Cyclohexane	0.062	0.022	0.248
Other C6's	0.155	0.065	0.635
Heptanes	0.120	0.051	0.537
Methylcyclohexane	0.040	0.016	0.187
2,2,4 Trimethylpentane	0.007	0.004	0.038
Benzene	0.042	0.012	0.156
Toluene	0.025	0.009	0.110
Ethylbenzene	0.001	0.000	0.005
Xylenes	0.006	0.002	0.030
Octanes Plus	<u>0.045</u>	<u>0.023</u>	<u>0.252</u>
Totals	100.000	5.555	100.000

**Real Characteristics Of Octanes Plus:**

Specific Gravity -----	4.087	(Air=1)
Molecular Weight -----	117.94	
Gross Heating Value -----	6216	BTU/CF

**Real Characteristics Of Total Sample:**

Specific Gravity -----	0.728	(Air=1)
Compressibility (Z) -----	0.9964	
Molecular Weight -----	21.01	
Gross Heating Value		
Dry Basis -----	1275	BTU/CF
Saturated Basis -----	1253	BTU/CF

Flaring/Venting Event Volume (MCF):	54
Flare or vent:	Vent
Date discovered:	4/7/2025
Date of event:	3/14/2025
Time event commenced:	11:21:00 PM
Time event terminated:	8:27:00 AM
Total Duration (hrs):	9.10

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 450904

DEFINITIONS

Operator:  MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID:  372098
	Action Number:  450904
	Action Type:  [C-129] Venting and/or Flaring (C-129)

DEFINITIONS

<p>For the sake of brevity and completeness, please allow for the following in all groups of questions and for the rest of this application:</p> <ul style="list-style-type: none"><li>• this application's operator, hereinafter "this operator";</li><li>• venting and/or flaring, hereinafter "vent or flare";</li><li>• any notification or report(s) of the C-129 form family, hereinafter "any C-129 forms";</li><li>• the statements in (and/or attached to) this, hereinafter "the statements in this";</li><li>• and the past tense will be used in lieu of mixed past/present tense questions and statements.</li></ul>
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**Energy, Minerals and Natural Resources**  
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**Santa Fe, NM 87505**

QUESTIONS

Action 450904

**QUESTIONS**

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 450904
	Action Type: [C-129] Venting and/or Flaring (C-129)

**QUESTIONS**

<b>Prerequisites</b> <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	[fAPP2125249869] CASS 16 STATE 234 TB

<b>Determination of Reporting Requirements</b> <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	Yes
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 <b>at least 50 MCF</b> 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 within 300 feet from an occupied permanent residence, school, hospital, institution or church in existence	No

<b>Equipment Involved</b>	
Primary Equipment Involved	Dump Valve
Additional details for Equipment Involved. Please specify	A hung dump valve resulted in excess gas being sent to storage vessels and vented through the thief hatches.

<b>Representative Compositional Analysis of Vented or Flared Natural Gas</b> <i>Please provide the mole percent for the percentage questions in this group.</i>	
Methane (CH4) percentage	79
Nitrogen (N2) percentage, if greater than one percent	1
Hydrogen Sulfide (H2S) PPM, rounded up	1
Carbon Dioxide (CO2) percentage, if greater than one percent	0
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.
Carbon Dioxide (CO2) percentage quality requirement	Not answered.
Oxygen (O2) percentage quality requirement	Not answered.

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QUESTIONS, Page 2

Action 450904

**QUESTIONS (continued)**

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 450904
	Action Type: [C-129] Venting and/or Flaring (C-129)

**QUESTIONS**

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	03/15/2024
Time vent or flare was discovered or commenced	12:00 AM
Time vent or flare was terminated	09:10 AM
Cumulative hours during this event	9

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Cause: Other   Dump Valve   Natural Gas Vented   Released: 54 Mcf   Recovered: 0 Mcf   Lost: 54 Mcf.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	A hung dump resulted in excess gas being sent to the storage vessels and venting through the thief hatches.
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	The dump valve malfunctioned during normal operations.
Steps taken to limit the duration and magnitude of vent or flare	Once identified, the dump valve was repaired and returned to normal operations.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	The dump valve was repaired and returned to normal operations.





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ACKNOWLEDGMENTS

Action 450904

**ACKNOWLEDGMENTS**

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 450904
	Action Type: [C-129] Venting and/or Flaring (C-129)

**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	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 <b>complete</b> C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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 450904

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 450904
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
cswansonsteege	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.	4/10/2025