

August 2, 2022

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

For: Marathon Oil Permian, LLC
5555 San Felipe Street
Houston, Texas 77056

Sample: Julius Fee
Sales Meter
Spot Gas Sample @ 141 psig & 107 °F

Date Sampled: 07/25/2022

Job Number: 222646.021

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.239	
Carbon Dioxide	1.230	
Methane	96.654	
Ethane	1.326	0.362
Propane	0.156	0.044
Isobutane	0.024	0.008
n-Butane	0.025	0.008
2-2 Dimethylpropane	0.003	0.001
Isopentane	0.011	0.004
n-Pentane	0.017	0.006
Hexanes	0.029	0.012
Heptanes Plus	<u>0.286</u>	<u>0.137</u>
Totals	100.000	0.583

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity ----- 3.917 (Air=1)
Molecular Weight ----- 113.19
Gross Heating Value ----- 6043 BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity ----- 0.588 (Air=1)
Compressibility (Z) ----- 0.9978
Molecular Weight ----- 16.98
Gross Heating Value
Dry Basis ----- 1050 BTU/CF
Saturated Basis ----- 1033 BTU/CF

*Hydrogen Sulfide tested on location by: Stain Tube Method (GPA 2377)
Results: 0.126 Gr/100 CF, 2.0 PPMV or 0.0002 Mol%

Base Conditions: 15.025 PSI & 60 Deg F

Sampled By: (24) Bayless
Analyst: RC
Processor: AS
Cylinder ID: T-3069

Certified: FESCO, Ltd. - Alice, Texas

Conan Pierce 361-661-7015

FESCO, Ltd.

Job Number: 222646.021

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.239		0.394
Carbon Dioxide	1.230		3.188
Methane	96.654		91.310
Ethane	1.326	0.362	2.348
Propane	0.156	0.044	0.405
Isobutane	0.024	0.008	0.082
n-Butane	0.025	0.008	0.086
2,2 Dimethylpropane	0.003	0.001	0.013
Isopentane	0.011	0.004	0.047
n-Pentane	0.017	0.006	0.072
2,2 Dimethylbutane	0.005	0.002	0.025
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.003	0.001	0.015
2 Methylpentane	0.008	0.003	0.041
3 Methylpentane	0.005	0.002	0.025
n-Hexane	0.008	0.003	0.041
Methylcyclopentane	0.004	0.001	0.020
Benzene	0.004	0.001	0.018
Cyclohexane	0.008	0.003	0.040
2-Methylhexane	0.004	0.002	0.024
3-Methylhexane	0.005	0.002	0.030
2,2,4 Trimethylpentane	0.002	0.001	0.013
Other C7's	0.008	0.004	0.047
n-Heptane	0.008	0.004	0.047
Methylcyclohexane	0.025	0.010	0.145
Toluene	0.011	0.004	0.060
Other C8's	0.048	0.023	0.312
n-Octane	0.028	0.015	0.188
Ethylbenzene	0.003	0.001	0.019
M & P Xylenes	0.018	0.007	0.113
O-Xylene	0.004	0.002	0.025
Other C9's	0.066	0.034	0.491
n-Nonane	0.022	0.013	0.166
Other C10's	0.016	0.010	0.133
n-Decane	0.001	0.001	0.008
Undecanes (11)	<u>0.001</u>	<u>0.001</u>	<u>0.009</u>
Totals	100.000	0.583	100.000

Computed Real Characteristics of Total Sample

Specific Gravity -----	0.588	(Air=1)
Compressibility (Z) -----	0.9978	
Molecular Weight -----	16.98	
Gross Heating Value		
Dry Basis -----	1050	BTU/CF
Saturated Basis -----	1033	BTU/CF

August 2, 2022

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

Sample: Julius Fee
 Sales Meter
 Spot Gas Sample @ 141 psig & 107 °F

Date Sampled: 07/25/2022

Job Number: 222646.021

GLYCALC FORMAT

COMPONENT	MOL%	GPM	Wt %
Carbon Dioxide	1.230		3.188
Hydrogen Sulfide	< 0.001		< 0.001
Nitrogen	0.239		0.394
Methane	96.654		91.310
Ethane	1.326	0.362	2.348
Propane	0.156	0.044	0.405
Isobutane	0.024	0.008	0.082
n-Butane	0.028	0.009	0.099
Isopentane	0.011	0.004	0.047
n-Pentane	0.017	0.006	0.072
Cyclopentane	0.000	0.000	0.000
n-Hexane	0.008	0.003	0.041
Cyclohexane	0.008	0.003	0.040
Other C6's	0.021	0.009	0.106
Heptanes	0.029	0.013	0.168
Methylcyclohexane	0.025	0.010	0.145
2,2,4 Trimethylpentane	0.002	0.001	0.013
Benzene	0.004	0.001	0.018
Toluene	0.011	0.004	0.060
Ethylbenzene	0.003	0.001	0.019
Xylenes	0.022	0.009	0.138
Octanes Plus	<u>0.182</u>	<u>0.095</u>	<u>1.307</u>
Totals	100.000	0.583	100.000

Real Characteristics Of Octanes Plus:

Specific Gravity ----- 4.221 (Air=1)
 Molecular Weight ----- 121.99
 Gross Heating Value ----- 6535 BTU/CF

Real Characteristics Of Total Sample:

Specific Gravity ----- 0.588 (Air=1)
 Compressibility (Z) ----- 0.9978
 Molecular Weight ----- 16.98
 Gross Heating Value
 Dry Basis ----- 1050 BTU/CF
 Saturated Basis ----- 1033 BTU/CF

August 2, 2022

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

For: Marathon Oil Permian, LLC
5555 San Felipe Street
Houston, Texas 77056

Sample: Julius Fee
First Stage Separator
Spot Gas Sample @ 143 psig & 92 °F

Date Sampled: 07/25/2022

Job Number: 222646.001

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.239	
Carbon Dioxide	1.208	
Methane	96.863	
Ethane	1.344	0.367
Propane	0.158	0.044
Isobutane	0.016	0.005
n-Butane	0.020	0.006
2-2 Dimethylpropane	0.002	0.001
Isopentane	0.010	0.004
n-Pentane	0.007	0.003
Hexanes	0.011	0.005
Heptanes Plus	<u>0.122</u>	<u>0.060</u>
Totals	100.000	0.495

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity ----- 4.001 (Air=1)
Molecular Weight ----- 115.62
Gross Heating Value ----- 6173 BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity ----- 0.581 (Air=1)
Compressibility (Z) ----- 0.9978
Molecular Weight ----- 16.80
Gross Heating Value
Dry Basis ----- 1041 BTU/CF
Saturated Basis ----- 1024 BTU/CF

*Hydrogen Sulfide tested on location by: Stain Tube Method (GPA 2377)
Results: 0.126 Gr/100 CF, 2.0 PPMV or 0.0002 Mol%

Base Conditions: 15.025 PSI & 60 Deg F

Sampled By: (24) D. Field
Analyst: RC
Processor: AS
Cylinder ID: T-3639

Certified: FESCO, Ltd. - Alice, Texas

Conan Pierce 361-661-7015

FESCO, Ltd.

Job Number: 222646.001

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286
TOTAL REPORT

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.239		0.399
Carbon Dioxide	1.208		3.165
Methane	96.863		92.513
Ethane	1.344	0.367	2.406
Propane	0.158	0.044	0.415
Isobutane	0.016	0.005	0.055
n-Butane	0.020	0.006	0.069
2,2 Dimethylpropane	0.002	0.001	0.009
Isopentane	0.010	0.004	0.043
n-Pentane	0.007	0.003	0.030
2,2 Dimethylbutane	0.002	0.001	0.010
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.001	0.000	0.005
2 Methylpentane	0.003	0.001	0.015
3 Methylpentane	0.002	0.001	0.010
n-Hexane	0.003	0.001	0.015
Methylcyclopentane	0.002	0.001	0.010
Benzene	0.002	0.001	0.009
Cyclohexane	0.003	0.001	0.015
2-Methylhexane	0.002	0.001	0.012
3-Methylhexane	0.002	0.001	0.012
2,2,4 Trimethylpentane	0.001	0.001	0.007
Other C7's	0.003	0.001	0.018
n-Heptane	0.003	0.001	0.018
Methylcyclohexane	0.010	0.004	0.058
Toluene	0.004	0.001	0.022
Other C8's	0.020	0.010	0.131
n-Octane	0.011	0.006	0.075
Ethylbenzene	0.002	0.001	0.013
M & P Xylenes	0.008	0.003	0.051
O-Xylene	0.002	0.001	0.013
Other C9's	0.026	0.013	0.195
n-Nonane	0.008	0.005	0.061
Other C10's	0.010	0.006	0.084
n-Decane	0.000	0.000	0.000
Undecanes (11)	<u>0.003</u>	<u>0.003</u>	<u>0.037</u>
Totals	100.000	0.495	100.000

Computed Real Characteristics of Total Sample

Specific Gravity -----	0.581	(Air=1)
Compressibility (Z) -----	0.9978	
Molecular Weight -----	16.80	
Gross Heating Value		
Dry Basis -----	1041	BTU/CF
Saturated Basis -----	1024	BTU/CF

August 2, 2022

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

Sample: Julius Fee
First Stage Separator
Spot Gas Sample @ 143 psig & 92 °F

Date Sampled: 07/25/2022

Job Number: 222646.001

GLYCALC FORMAT

COMPONENT	MOL%	GPM	Wt %
Carbon Dioxide	1.208		3.165
Hydrogen Sulfide	< 0.001		< 0.001
Nitrogen	0.239		0.399
Methane	96.863		92.513
Ethane	1.344	0.367	2.406
Propane	0.158	0.044	0.415
Isobutane	0.016	0.005	0.055
n-Butane	0.022	0.007	0.078
Isopentane	0.010	0.004	0.043
n-Pentane	0.007	0.003	0.030
Cyclopentane	0.000	0.000	0.000
n-Hexane	0.003	0.001	0.015
Cyclohexane	0.003	0.001	0.015
Other C6's	0.008	0.003	0.040
Heptanes	0.012	0.005	0.070
Methylcyclohexane	0.010	0.004	0.058
2,2,4 Trimethylpentane	0.001	0.001	0.007
Benzene	0.002	0.001	0.009
Toluene	0.004	0.001	0.022
Ethylbenzene	0.002	0.001	0.013
Xylenes	0.010	0.004	0.064
Octanes Plus	<u>0.078</u>	<u>0.042</u>	<u>0.583</u>
Totals	100.000	0.495	100.000

Real Characteristics Of Octanes Plus:

Specific Gravity ----- 4.343 (Air=1)
Molecular Weight ----- 125.53
Gross Heating Value ----- 6731 BTU/CF

Real Characteristics Of Total Sample:

Specific Gravity ----- 0.581 (Air=1)
Compressibility (Z) ----- 0.9978
Molecular Weight ----- 16.80
Gross Heating Value
Dry Basis ----- 1041 BTU/CF
Saturated Basis ----- 1024 BTU/CF

August 3, 2022

FESCO, Ltd.
1100 FESCO Avenue - Alice, Texas 78332

For: Marathon Oil Permian, LLC
 5555 San Felipe Street
 Houston, Texas 77056

Sample: Julius Fee
 First Stage Separator Hydrocarbon Liquid
 Sampled @ 143 psig & 92 °F

Date Sampled: 07/25/2022

Job Number: 222646.002

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2186-M

COMPONENT	MOL %	LIQ VOL %	WT %
Nitrogen	0.026	0.004	0.004
Carbon Dioxide	0.105	0.025	0.025
Methane	4.224	1.000	0.363
Ethane	0.383	0.143	0.062
Propane	0.169	0.065	0.040
Isobutane	0.059	0.027	0.018
n-Butane	0.093	0.041	0.029
2,2 Dimethylpropane	0.011	0.006	0.004
Isopentane	0.100	0.051	0.039
n-Pentane	0.083	0.042	0.032
2,2 Dimethylbutane	0.027	0.016	0.013
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.022	0.013	0.010
2 Methylpentane	0.088	0.051	0.041
3 Methylpentane	0.070	0.040	0.032
n-Hexane	0.106	0.061	0.049
Heptanes Plus	<u>94.433</u>	<u>98.415</u>	<u>99.239</u>
Totals:	100.000	100.000	100.000

Characteristics of Heptanes Plus:

Specific Gravity -----	0.8327 (Water=1)
°API Gravity -----	38.44 @ 60°F
Molecular Weight -----	196.0
Vapor Volume -----	13.15 CF/Gal
Weight -----	6.94 Lbs/Gal

Characteristics of Total Sample:

Specific Gravity -----	0.8258 (Water=1)
°API Gravity -----	39.86 @ 60°F
Molecular Weight -----	186.5
Vapor Volume -----	13.70 CF/Gal
Weight -----	6.88 Lbs/Gal

Base Conditions: 15.025 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

Sampled By: (24) B. Bayless
 Analyst: JL
 Processor: ANBdjv
 Cylinder ID: W-1418

 Conan Pierce 361-661-7015

FESCO, Ltd.

Job Number: 222646.002

TANKS DATA INPUT REPORT - GPA 2186-M

COMPONENT	Mol %	LiqVol %	Wt %
Carbon Dioxide	0.105	0.025	0.025
Nitrogen	0.026	0.004	0.004
Methane	4.224	1.000	0.363
Ethane	0.383	0.143	0.062
Propane	0.169	0.065	0.040
Isobutane	0.059	0.027	0.018
n-Butane	0.104	0.047	0.033
Isopentane	0.100	0.051	0.039
n-Pentane	0.083	0.042	0.032
Other C-6's	0.208	0.120	0.096
Heptanes	0.479	0.287	0.247
Octanes	4.224	2.766	2.480
Nonanes	6.845	5.099	4.656
Decanes Plus	80.226	88.853	90.370
Benzene	0.030	0.012	0.013
Toluene	0.333	0.156	0.164
E-Benzene	0.303	0.163	0.172
Xylenes	1.972	1.063	1.122
n-Hexane	0.106	0.061	0.049
2,2,4 Trimethylpentane	<u>0.023</u>	<u>0.017</u>	<u>0.014</u>
Totals:	100.000	100.000	100.000

Characteristics of Total Sample:

Specific Gravity -----	0.8258	(Water=1)
°API Gravity -----	39.86	@ 60°F
Molecular Weight-----	186.5	
Vapor Volume -----	13.70	CF/Gal
Weight -----	6.88	Lbs/Gal

Characteristics of Decanes (C10) Plus:

Specific Gravity -----	0.8399	(Water=1)
Molecular Weight-----	210.1	

Characteristics of Atmospheric Sample:

°API Gravity -----	38.96	@ 60°F
Reid Vapor Pressure Equivalent (D-6377)-----	5.66	psi

QUALITY CONTROL CHECK		
	Sampling Conditions	Test Samples
Cylinder Number	-----	W-1418* -----
Pressure, PSIG	143	138 -----
Probe Temperature, °F	92	92 -----

* Sample used for analysis

FESCO, Ltd.

Job Number: 222646.002

TOTAL EXTENDED REPORT - GPA 2186-M

COMPONENT	Mol %	LiqVol %	Wt %
Nitrogen	0.026	0.004	0.004
Carbon Dioxide	0.105	0.025	0.025
Methane	4.224	1.000	0.363
Ethane	0.383	0.143	0.062
Propane	0.169	0.065	0.040
Isobutane	0.059	0.027	0.018
n-Butane	0.093	0.041	0.029
2,2 Dimethylpropane	0.011	0.006	0.004
Isopentane	0.100	0.051	0.039
n-Pentane	0.083	0.042	0.032
2,2 Dimethylbutane	0.027	0.016	0.013
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.022	0.013	0.010
2 Methylpentane	0.088	0.051	0.041
3 Methylpentane	0.070	0.040	0.032
n-Hexane	0.106	0.061	0.049
Methylcyclopentane	0.031	0.015	0.014
Benzene	0.030	0.012	0.013
Cyclohexane	0.082	0.039	0.037
2-Methylhexane	0.056	0.036	0.030
3-Methylhexane	0.060	0.038	0.032
2,2,4 Trimethylpentane	0.023	0.017	0.014
Other C-7's	0.080	0.048	0.042
n-Heptane	0.171	0.110	0.092
Methylcyclohexane	0.632	0.355	0.333
Toluene	0.333	0.156	0.164
Other C-8's	2.416	1.570	1.428
n-Octane	1.176	0.842	0.720
E-Benzene	0.303	0.163	0.172
M & P Xylenes	1.450	0.786	0.825
O-Xylene	0.521	0.277	0.297
Other C-9's	4.675	3.393	3.164
n-Nonane	2.170	1.706	1.492
Other C-10's	4.788	3.819	3.626
n-decane	0.970	0.832	0.740
Undecanes(11)	6.476	5.300	5.104
Dodecanes(12)	7.431	6.568	6.414
Tridecanes(13)	8.714	8.259	8.175
Tetradecanes(14)	9.178	9.318	9.349
Pentadecanes(15)	8.704	9.465	9.613
Hexadecanes(16)	7.088	8.237	8.436
Heptadecanes(17)	6.023	7.402	7.652
Octadecanes(18)	5.320	6.884	7.159
Nonadecanes(19)	4.299	5.795	6.062
Eicosanes(20)	3.362	4.710	4.956
Heneicosanes(21)	3.412	5.030	5.323
Docosanes(22)	1.740	2.673	2.845
Tricosanes(23)	1.190	1.895	2.028
Tetracosanes(24)	0.672	1.110	1.193
Pentacosanes(25)	0.381	0.653	0.706
Hexacosanes(26)	0.205	0.363	0.394
Heptacosanes(27)	0.105	0.194	0.211
Octacosanes(28)	0.058	0.110	0.120
Nonacosanes(29)	0.037	0.072	0.079
Triacontanes(30)	0.024	0.049	0.054
Hentriacontanes Plus(31+)	<u>0.050</u>	<u>0.117</u>	<u>0.130</u>
Total	100.000	100.000	100.000

August 3, 2022

FESCO, Ltd.
1100 Fesco Avenue - Alice, Texas 78332

For: Marathon Oil Permian, LLC
5555 San Felipe Street
Houston, Texas 77056

Date Sampled: 07/25/22

Date Analyzed: 07/28/22

Sample: Julius Fee

Job Number: J222646

FLASH LIBERATION OF HYDROCARBON LIQUID		
	Separator HC Liquid	Stock Tank
Pressure, psig	143	0
Probe Temperature, °F	92	70
Gas Oil Ratio (1)	-----	26.2
Gas Specific Gravity (2)	-----	0.688
Separator Volume Factor (3)	1.0454	1.000

STOCK TANK FLUID PROPERTIES	
Shrinkage Recovery Factor (4)	0.9566
Oil API Gravity at 60 °F	38.96
Reid Vapor Pressure Equivalent (D-6377), psi (5)	5.66

Quality Control Check			
	Sampling Conditions	Test Samples	
Cylinder No.	-----	W-1418*	-----
Pressure, psig	143	138	-----
Temperature, °F	92	92	-----

(1) - Scf of flashed vapor per barrel of stock tank oil

(2) - Air = 1.000

(3) - Separator volume / Stock tank volume

(4) - Fraction of first stage separator liquid

(5) - Absolute pressure at 100 deg F

Analyst: R.E.

* Sample used for flash study

Base Conditions: 15.025 PSI & 60 °F

Certified: FESCO, Ltd. - Alice, Texas

Conan Pierce 361-661-7015

August 2, 2022

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

For: Marathon Oil Permian, LLC
5555 San Felipe Street
Houston, Texas 77056

Sample: Julius Fee
Gas Evolved from Hydrocarbon Liquid Flashed
From 143 psig & 92 °F to 0 psig & 70 °F

Date Sampled: 07/25/2022

Job Number: 222646.011

CHROMATOGRAPH EXTENDED ANALYSIS - GPA 2286

COMPONENT	MOL%	GPM
Hydrogen Sulfide*	< 0.001	
Nitrogen	0.282	
Carbon Dioxide	1.811	
Methane	88.600	
Ethane	5.283	1.446
Propane	1.259	0.355
Isobutane	0.169	0.057
n-Butane	0.277	0.089
2-2 Dimethylpropane	0.008	0.003
Isopentane	0.082	0.031
n-Pentane	0.106	0.039
Hexanes	0.409	0.172
Heptanes Plus	<u>1.714</u>	<u>0.799</u>
Totals	100.000	2.991

Computed Real Characteristics Of Heptanes Plus:

Specific Gravity ----- 3.776 (Air=1)
Molecular Weight ----- 109.00
Gross Heating Value ----- 5835 BTU/CF

Computed Real Characteristics Of Total Sample:

Specific Gravity ----- 0.688 (Air=1)
Compressibility (Z) ----- 0.9967
Molecular Weight ----- 19.85
Gross Heating Value
Dry Basis ----- 1190 BTU/CF
Saturated Basis ----- 1170 BTU/CF

*Hydrogen Sulfide tested in laboratory by: Stain Tube Method (GPA 2377)
Results: 0.047 Gr/100 CF, 0.8 PPMV or <0.0001 Mol%

Base Conditions: 15.025 PSI & 60 Deg F

Sampled By: (16) Vera
Analyst: RC
Processor: AS
Cylinder ID: Flash#8S

Certified: FESCO, Ltd. - Alice, Texas

Conan Pierce 361-661-7015

FESCO, Ltd.

Job Number: 222646.011

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

COMPONENT	MOL %	GPM	WT %
Hydrogen Sulfide*	< 0.001		< 0.001
Nitrogen	0.282		0.398
Carbon Dioxide	1.811		4.014
Methane	88.600		71.586
Ethane	5.283	1.446	8.001
Propane	1.259	0.355	2.796
Isobutane	0.169	0.057	0.495
n-Butane	0.277	0.089	0.811
2,2 Dimethylpropane	0.008	0.003	0.029
Isopentane	0.082	0.031	0.298
n-Pentane	0.106	0.039	0.385
2,2 Dimethylbutane	0.036	0.015	0.156
Cyclopentane	0.000	0.000	0.000
2,3 Dimethylbutane	0.035	0.015	0.152
2 Methylpentane	0.092	0.039	0.399
3 Methylpentane	0.054	0.023	0.234
n-Hexane	0.192	0.081	0.833
Methylcyclopentane	0.049	0.018	0.208
Benzene	0.064	0.018	0.252
Cyclohexane	0.080	0.028	0.339
2-Methylhexane	0.038	0.018	0.192
3-Methylhexane	0.039	0.018	0.197
2,2,4 Trimethylpentane	0.013	0.007	0.075
Other C7's	0.066	0.029	0.330
n-Heptane	0.140	0.066	0.707
Methylcyclohexane	0.189	0.078	0.935
Toluene	0.100	0.034	0.464
Other C8's	0.294	0.140	1.632
n-Octane	0.149	0.078	0.857
Ethylbenzene	0.014	0.006	0.075
M & P Xylenes	0.054	0.021	0.289
O-Xylene	0.011	0.004	0.059
Other C9's	0.226	0.117	1.437
n-Nonane	0.058	0.033	0.375
Other C10's	0.070	0.042	0.498
n-Decane	0.005	0.003	0.036
Undecanes (11)	<u>0.055</u>	<u>0.039</u>	<u>0.456</u>
Totals	100.000	2.991	100.000

Computed Real Characteristics Of Total Sample:

Specific Gravity -----	0.688	(Air=1)
Compressibility (Z) -----	0.9967	
Molecular Weight -----	19.85	
Gross Heating Value		
Dry Basis -----	1190	BTU/CF
Saturated Basis -----	1170	BTU/CF

Flaring/Venting Event Volume (MCF):	221.68
Flare or vent:	Flare
Date:	4/22/2022
Time discovered:	8:15 AM
Time terminated:	8:35 AM
Total Duration (hrs):	0:20

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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

DEFINITIONS

Action 183478

DEFINITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 183478
	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 183478

QUESTIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 183478
	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 these issues before continuing with the rest of the questions.

Incident Well	[30-015-32532] JULIUS FEE #001
Incident Facility	Unavailable.

Determination of Reporting Requirements

Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.

Was this vent or flare caused by an emergency or malfunction	No
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 venting 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 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

Please provide the mole percent for the percentage questions in this group.

Methane (CH4) percentage	97
Nitrogen (N2) percentage, if greater than one percent	0
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (CO2) percentage, if greater than one percent	1
Oxygen (O2) 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 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 183478

QUESTIONS (continued)

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 183478
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	04/22/2022
Time vent or flare was discovered or commenced	08:15 AM
Time vent or flare was terminated	08:35 AM
Cumulative hours during this event	0

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Cause: Downhole Well Maintenance Well Natural Gas Vented Released: 222 Mcf Recovered: 0 Mcf Lost: 222 Mcf.
Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
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	WO rig supervisor was trying to reduce wellhead pressure prior to nipping down the production tree and nipping up the BOP. The pressure reduction was conducted for safety reasons.
Steps taken to limit the duration and magnitude of vent or flare	The WO supervisor did not blow the well down to zero psi but rather limited the blow down period.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	No corrective actions. Well blowdown had to be completed for safety reasons and downhole well maintenance.

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ACKNOWLEDGMENTS

Action 183478

ACKNOWLEDGMENTS

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	Action Number: 183478
	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 183478

CONDITIONS

Operator: MARATHON OIL PERMIAN LLC 990 Town & Country Blvd. Houston, TX 77024	OGRID: 372098
	Action Number: 183478
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
icastro	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.	3/6/2023