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575.397.3713 2609 W MARLAND HOBBS, NEW MEXICO 88240

### EXTENDED GAS REPORT SUMMARY OF CHROMATOGRAPHIC ANALYSIS

<b>Sample Name:</b>	Red Hills Comp Inlet	<b>For:</b>	11992G
<b>Sample Date:</b>	08/06/2021	<b>Cyl. Ident.:</b>	2021044514
<b>Sampled By:</b>	DJ	<b>Company:</b>	Mark West
<b>Time Sampled:</b>	12:30	<b>Analysis Date:</b>	08/10/2021
<b>Sample Temp:</b>	0.0 F	<b>Analysis By:</b>	BH
<b>Sample Press:</b>	80.0	<b>Data File:</b>	LS_6232.D

H2S (PPM) = 0.0

Component	Mole%	GPM REAL	GPM IDEAL
H2S	0.000		
Nitrogen	1.037		
Methane	70.146		
CO2	0.359		
Ethane	13.469	3.601	3.593
Propane	7.839	2.159	2.154
Isobutane	1.152	0.377	0.376
N-Butane	2.882	0.908	0.906
Isopentane	0.702	0.257	0.256
N-Pentane	0.817	0.296	0.295
Hexanes+	1.597	0.672	0.670
Total	100.000	8.270	8.250

### CALCULATED PARAMETERS

#### TOTAL ANALYSIS SUMMARY

MOLE WT: 24.151  
VAPOR PRESS PSIA: 3632.5  
SPECIFIC GRAVITY  
AIR = 1 (REAL): 0.8371  
AIR = 1 (IDEAL): 0.8334  
H2O = 1 (IDEAL): 0.376

REPORTED BASIS: 14.73  
Unnormalized Total: 99.101

#### HEATING VALUE

BTU/CUFT (DRY) 1428.3  
BTU/CUFT (WET) 1404.1

#### BTEX SUMMARY

WT% BENZENE 2.789  
WT% TOLUENE 2.555  
WT% E BENZENE 0.212  
WT% XYLENES 1.698

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LAB MANAGER

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**Sample Name:** Red Hills Comp Inlet  
**Company:** Mark West

**Data File:** LS\_6232.D**\*ANALYSIS OF HEXANES PLUS**

Component	MOLE%	WT%
2,2 DIMETHYL BUTANE	0.009	0.031
CYCLOPENTANE	0.061	0.197
2-METHYLPENTANE	0.192	0.685
3-METHYLPENTANE	0.102	0.364
HEXANE (C6)	0.266	0.941
DIMETHYLPENTANES	0.016	0.064
METHYLCYCLOPENTANE	0.115	0.401
2,2,3 TRIMETHYLBUTANE	0.001	0.004
BENZENE	0.032	0.103
CYCLOHEXANE	0.137	0.478
2-METHYLHEXANE	0.037	0.154
3-METHYLHEXANE	0.058	0.240
DIMETHYLCYCLOPENTANES	0.020	0.082
HEPTANE (C7)	0.092	0.382
METHYLCYCLOHEXANE	0.134	0.549
2,5 DIMETHYLHEXANE	0.002	0.011
TOLUENE	0.039	0.148
2-METHYLHEPTANE	0.026	0.125
OTHER OCTANES	0.067	0.308
OCTANE (C8)	0.029	0.137
ETHYLCYCLOHEXANE	0.009	0.043
ETHYL BENZENE	0.003	0.012
M,P-XYLENE	0.019	0.084
O-XYLENE	0.005	0.022
OTHER NONANES	0.031	0.159
NONANE (C-9)	0.013	0.071
IC3 BENZENE	0.003	0.016
CYCLOOCTANE	0.000	0.000
NC3 BENZENE	0.000	0.001
TM BENZENE(S)	0.003	0.017
IC4 BENZENE	0.000	0.000
NC4 BENZENE	0.001	0.006
DECANES + (C10+)	0.027	0.170

**\*HEXANES PLUS SUMMARY**

AVG MOLE WT	94.071
VAPOR PRESS PSIA	9.860
API GRAVITY @ 60F	66.4
SPECIFIC GRAVITY	
AIR = 1 (IDEAL):	2.975
H2O = 1 (IDEAL):	0.715

**COMPONENT RATIOS**

HEXANES (C6) MOLE%	39.315
HEPTANES (C7) MOLE%	34.825
OCTANES (C8) MOLE%	18.570
NONANES (C9) MOLE%	4.995
DECANES+ (C10+) MOLE%	2.295
HEXANES (C6) WT%	35.690
HEPTANES (C7) WT%	34.148
OCTANES (C8) WT%	20.539
NONANES (C9) WT%	6.281
DECANES+ (C10+) WT%	3.342

Remarks: spot

\* Hexane+ portion calculated by Allocation Process

**Summary of Excess Emission at Red Hills Flare**

Month	Total Excess		Total Excess		Total Excess
	Emissions	VOC	Emissions	VOC	Emissions
	(lbs)	(lbs)	(tons)	(tons)	(scf)
Mar	13166.01	8667.61	6.58	4.33	143056
Apr	65409.69	43762.82	32.70	21.88	645750
May	30535.76	19828.49	15.27	9.91	318240
Jun	27855.06	17603.65	13.93	8.80	295380
Jul	48013.44	30682.43	24.01	15.34	504510
Aug	3580.66	2244.91	1.79	1.12	38196
Totals	188560.63	122789.91	94.28	61.39	1945132

Constituent	Wt % of	
	Total	Emissions
Methane	15.45%	
N2	0.35%	
H2S	0.00%	
CO2	1.38%	
O2	0.00%	

**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  
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**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

Action 53890

**QUESTIONS**

Operator: MarkWest Energy West Texas Gas Company, L.L.C 1515 Arapahoe Street Denver, CO 80202	OGRID: 329252
	Action Number: 53890
	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	Not answered.
Incident Facility	[fAPP2125136221] Permian Natural Gas Gathering System

**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 or is this venting and/or flaring caused by an emergency or malfunction	No
Did or will this venting and/or flaring last eight hours or more cumulatively within any 24-hour period from a single event	Yes
Is this considered a submission for a venting and/or flaring event	Yes, major 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 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 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 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	Tank ( Any)
Additional details for Equipment Involved. Please specify	Tank Thief hatch.

**Representative Compositional Analysis of Vented or Flared Natural Gas**

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

Methane (CH4) percentage	15
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.

**Date(s) and Time(s)**

Date venting and/or flaring was discovered or commenced	10/04/2021
Time venting and/or flaring was discovered or commenced	02:46 PM
Time venting and/or flaring was terminated	05:00 PM
Cumulative hours during this event	840

**Measured or Estimated Volume of Vented or Flared Natural Gas**

Natural Gas Vented (Mcf) Details	Cause: Other   Tank ( Any)   Natural Gas Vented   Released: 1,945 Mcf   Recovered: 0 Mcf   Lost: 1,945 Mcf ]
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Natural Gas Flared (Mcf) Details	Not answered.
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Abnormal conditions observed 7/8/21, initial determination of excessive venting 10/4/2021
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	No
Was notification of downstream activity received by you or your operator	Not answered.
Downstream OGRID that should have notified you or your operator	Not answered.
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	Assumptions used as a basis for design were not observed in the actual operating conditions of the site. Tank pressure exceeded control set point of the thief hatch.
Steps taken to limit the duration and magnitude of venting and/or flaring	Troubleshooting, flow reduced, curtailed production and installed vapor recovery unit.
Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring	Installation of VRU (8/12/21); plan to install increased capacity flare as a back-up upon authorization.

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CONDITIONS  
  
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Operator: MarkWest Energy West Texas Gas Company, L.L.C 1515 Arapahoe Street Denver, CO 80202	OGRID: 329252
	Action Number: 53890
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
jobrien	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.	10/4/2021