



Certificate of Analysis

Number: 5030-18110072-011A

Midland Laboratory
 3312 Bankhead Highway
 Midland, TX 79701
 Phone 432-689-7252

Ethan McMahon
 Comm Engineering
 1319 West Pinhook Rd
 Suite 401
 Lafayette, LA 70503

Dec. 13, 2018

Station Name: LEA UNIT CTB/TPG
 Station Location: LEA COUNTY NM
 Sample Point: HEATER TREATER
 Analyzed: 11/08/2018 20:32:52 by Administrator

Sampled By: JOSEPH WHITAKER
 Sample Of: Gas Spot
 Sample Date: 11/07/2018 07:50
 Sample Conditions: 35 psig, @ 111 °F
 Method: GPA 2286

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia	
Hydrogen Sulfide	0.010	0.013		GPM TOTAL C2+
Nitrogen	2.745	2.844		GPM TOTAL C3+
Carbon Dioxide	3.903	6.352		GPM TOTAL iC5+
Methane	58.216	34.536		
Ethane	15.145	16.841	4.050	
Propane	11.467	18.699	3.159	
Iso-butane	1.474	3.168	0.482	
n-Butane	4.028	8.658	1.270	
Iso-pentane	0.867	2.313	0.317	
n-Pentane	0.904	2.412	0.328	
Hexanes Plus	1.241	4.164	0.488	
	100.000	100.000	10.094	

Calculated Physical Properties	Total	C6+
Relative Density Real Gas	0.9383	3.1036
Calculated Molecular Weight	27.04	89.89
Compressibility Factor	0.9943	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F		
Real Gas Dry BTU	1458	4790
Water Sat. Gas Base BTU	1433	4707

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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Components	Mol. %	Wt. %	GPM at 14.65 psia	
Hydrogen Sulfide	0.010	0.013		GPM TOTAL C2+
Nitrogen	2.745	2.844		GPM TOTAL C3+
Methane	58.216	34.536		GPM TOTAL iC5+
Carbon Dioxide	3.903	6.352		
Ethane	15.145	16.841	4.050	
Propane	11.467	18.699	3.159	
Iso-Butane	1.474	3.168	0.482	
n-Butane	4.028	8.658	1.270	
Iso-Pentane	0.867	2.313	0.317	
n-Pentane	0.904	2.412	0.328	
Hexanes	0.515	1.618	0.208	
Heptanes Plus	0.726	2.546	0.280	
	100.000	100.000	10.094	

Calculated Physical Properties	Total	C7+
Relative Density Real Gas	0.9383	3.2292
Calculated Molecular Weight	27.04	93.53
Compressibility Factor	0.9943	
26 # Gasoline	6.0734	
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F		
Real Gas Dry BTU	1458.3	4890.1
Water Sat. Gas Base BTU	1432.7	4804.6

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 Method: GPA 2286

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia	
Hydrogen Sulfide	0.010	0.013		GPM TOTAL C2+ 10.094
Nitrogen	2.745	2.844		
Carbon Dioxide	3.903	6.352		
Methane	58.216	34.536		
Ethane	15.145	16.841	4.050	
Propane	11.467	18.699	3.159	
Iso-Butane	1.474	3.168	0.482	
n-Butane	4.028	8.658	1.270	
Iso-Pentane	0.867	2.313	0.317	
n-Pentane	0.904	2.412	0.328	
i-Hexanes	0.333	1.036	0.133	
n-Hexane	0.182	0.582	0.075	
Benzene	0.098	0.282	0.028	
Cyclohexane	0.120	0.371	0.041	
i-Heptanes	0.232	0.782	0.091	
n-Heptane	0.041	0.152	0.019	
Toluene	0.050	0.169	0.017	
i-Octanes	0.123	0.481	0.054	
n-Octane	0.011	0.049	0.006	
Ethylbenzene	0.005	0.017	0.002	
Xylenes	0.012	0.039	0.004	
i-Nonanes	0.014	0.092	0.007	
n-Nonane	0.007	0.031	0.004	
Decane Plus	0.013	0.081	0.007	
	100.000	100.000	10.094	

Calculated Physical Properties	Total	C10+
Calculated Molecular Weight	27.04	128.37
GPA 2172 Calculation:		
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F		
Real Gas Dry BTU	1458.3	6644.4
Water Sat. Gas Base BTU	1432.7	6528.1
Relative Density Real Gas	0.9383	4.4420
Compressibility Factor	0.9943	

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New Mexico OCD C-129

Calculations or Specific Justification for Volumes

- **Calculations**
No calculations of volume of vent/flare necessary. Volumes are metered.
- **Specific Justification for Volumes**
Metered volumes that were previously sold via pipeline. Must flare gas due to sales pipeline being shut-in.

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

Action 31724

QUESTIONS

Operator: LEGACY RESERVES OPERATING, LP 15 Smith Road Midland, TX 79705	OGRID: 240974
	Action Number: 31724
	Action Type: [C-129] Venting and/or Flaring (C-129)

QUESTIONS**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 or flaring caused by an emergency or malfunction	No
Did or will this venting 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 notification of a major venting or flaring	Yes, major venting or flaring of natural gas.
The operator shall file a form C-141 instead of a form C-129 for a release that includes liquid during venting or flaring that is or may be a major or minor release under 19.13.29.7 NMAC	
Was there or will there be at least 50 MCF of natural gas vented or flared during this event	Yes
Did this venting 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

Unregistered Facility Site

Please provide the facility details, if the venting or flaring occurred or is occurring at a facility that does not have an Facility ID (##) yet.

Facility or Site Name	Not answered.
Facility Type	Not answered.

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	58
Nitrogen (N2) percentage, if greater than one percent	3
Hydrogen Sulfide (H2S) PPM, rounded up	90
Carbon Dioxide (CO2) percentage, if greater than one percent	4
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 or flaring was discovered or commenced	06/13/2021
Time venting or flaring was discovered or commenced	01:00 PM
Is the venting or flaring event complete	No
Date venting or flaring was terminated	Not answered.
Time venting or flaring was terminated	Not answered.
Total duration of venting or flaring in hours, if venting or flaring has terminated	Not answered.
Longest duration of cumulative hours within any 24-hour period during this event	24

Measured or Estimated Volume of Vented or Flared Natural Gas

Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Cause: Midstream Emergency Maintenance Separator Natural Gas Flared Spilled: 3,500 Mcf Recovered: 0 Mcf Lost: 3,500 Mcf
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Measured
Is this a gas only submission (i.e. only 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 or flaring a result of downstream activity	Yes
Date notified of downstream activity requiring this venting or flaring	Not answered.
Time notified of downstream activity requiring this venting 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	Sales pipeline shut-in.
Steps taken to limit the duration and magnitude of venting or flaring	Communicate with sales pipeline for anticipated date of return service.
Corrective actions taken to eliminate the cause and reoccurrence of venting or flaring	Communicate with sales pipeline for anticipated date of return service.

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CONDITIONS

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	Action Number: 31724
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
system	If the information provided in this report requires an amendment, submit a [C-129] Request to Amend Venting and/or Flaring Incident, utilizing your incident number from this event.	6/14/2021