

Certificate of Analysis

Number: 5030-18110072-013A

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

Dec. 13, 2018

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

Station Name: HAMON FED TRAIN 2 Station Location: LEA COUNTY NM Sample Point: METER TUBE Cylinder No: 5030-00357

11/08/2018 21:33:14 by DS Analyzed:

Sampled By: JOSEPH WHITAKER Sample Of: Gas Spot Sample Date: 11/07/2018 08:40 Sample Conditions: 99.4 psig, @ 76.8 °F

GPA 2286 Method:

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia			
Hydrogen Sulfide	0.002	0.274		GPM TOTAL C2+	5.794	
Nitrogen	3.719	4.183		GPM TOTAL C3+	3.076	
Carbon Dioxide	10.905	19.268		GPM TOTAL iC5+	0.749	
Methane	64.950	41.832				
Ethane	10.180	12.289	2.718			
Propane	5.589	9.894	1.537			
Iso-butane	0.683	1.594	0.223			
n-Butane	1.803	4.207	0.567			
Iso-pentane	0.496	1.437	0.181			
n-Pentane	0.555	1.608	0.200			
Hexanes Plus	0.920	3.414	0.368			
	100.000	100.000	5.794			
Calculated Physica	I Properties		Total	C6+		
Relative Density Rea	l Gas		0.8629	3.1549		
Calculated Molecular Weight			24.91	91.38		
Compressibility Factor		0.9959				
GPA 2172 Calculati	on:					
Calculated Gross B	TU per ft ³ @	14.65 psi	a & 60°F			
Real Gas Dry BTU	•	•	1147	4858		
Water Sat. Gas Base	BTU		1127	4773		

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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Analytical Data

Hydrogen Sulfide	Components	Mol. %	Wt. %	GPM at 14.65 psia			
Nitrogen 3.719 4.183 GPM TOTAL C3+ 3.0760 Methane 64.950 41.832 GPM TOTAL iC5+ 0.7490 Carbon Dioxide 10.905 19.268 Ethane 10.180 12.289 2.718 Propane 5.589 9.894 1.537 1507	Hvdrogen Sulfide	0.002	0.274		GPM TOTAL C2+	5.7940	
Carbon Dioxide 10.905 19.268 Ethane 10.180 12.289 2.718 Propane 5.589 9.894 1.537 Iso-Butane 0.683 1.594 0.223 n-Butane 1.803 4.207 0.567 Iso-Pentane 0.496 1.437 0.181 n-Pentane 0.555 1.608 0.200 Hexanes 0.366 1.258 0.150 Heptanes Plus 0.554 2.156 0.218 100.000 100.000 5.794 Calculated Physical Properties Total C7+ Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3		3.719	4.183		GPM TOTAL C3+	3.0760	
Ethane 10.180 12.289 2.718 Propane 5.589 9.894 1.537 Iso-Butane 0.683 1.594 0.223 n-Butane 1.803 4.207 0.567 Iso-Pentane 0.496 1.437 0.181 n-Pentane 0.555 1.608 0.200 Hexanes 0.366 1.258 0.150 Heptanes Plus 0.554 2.156 0.218 100.000 100.000 5.794 Calculated Physical Properties Total C7+ Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Methane	64.950	41.832		GPM TOTAL iC5+	0.7490	
Propane 5.589 9.894 1.537 Iso-Butane 0.683 1.594 0.223 n-Butane 1.803 4.207 0.567 Iso-Pentane 0.496 1.437 0.181 n-Pentane 0.555 1.608 0.200 Hexanes 0.366 1.258 0.150 Heptanes Plus 0.554 2.156 0.218 100.000 100.000 5.794 Calculated Physical Properties Total C7+ Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Carbon Dioxide	10.905	19.268				
Iso-Butane	Ethane	10.180	12.289	2.718			
n-Butane 1.803 4.207 0.567 Iso-Pentane 0.496 1.437 0.181 n-Pentane 0.555 1.608 0.200 Hexanes 0.366 1.258 0.150 Heptanes Plus 0.554 2.156 0.218 100.000 100.000 5.794 Calculated Physical Properties Total C7+ Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Propane	5.589	9.894	1.537			
Iso-Pentane	Iso-Butane	0.683	1.594	0.223			
n-Pentane	n-Butane	1.803	4.207	0.567			
Hexanes 0.366 1.258 0.150 Heptanes Plus 0.554 2.156 0.218 100.000 100.000 5.794 Calculated Physical Properties Total C7+ Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Iso-Pentane	0.496	1.437	0.181			
Heptanes Plus	n-Pentane	0.555	1.608	0.200			
Calculated Physical Properties Total C7+ Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 95.61 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F 4986.3	Hexanes	0.366	1.258	0.150			
Calculated Physical Properties Total C7+ Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Heptanes Plus	0.554	2.156	0.218			
Relative Density Real Gas 0.8629 3.3012 Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3		100.000	100.000	5.794			
Calculated Molecular Weight 24.91 95.61 Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Calculated Physica	al Properties		Total	C7+		
Compressibility Factor 0.9959 26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Relative Density Rea	al Gas		0.8629	3.3012		
26 # Gasoline 3.5374 GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Calculated Molecula	r Weight		24.91	95.61		
GPA 2172 Calculation: Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	Compressibility Fact	•		0.9959			
Calculated Gross BTU per ft³ @ 14.65 psia & 60°F Real Gas Dry BTU 1147.1 4986.3	26 # Gasoline			3.5374			
Real Gas Dry BTU 1147.1 4986.3	GPA 2172 Calculat	ion:					
·	Calculated Gross E	BTU per ft ³ @	14.65 psi	a & 60°F			
Water Sat. Gas Base BTU 1127.0 4899.1	Real Gas Dry BTU			1147.1	4986.3		
	Water Sat. Gas Bas	e BTU		1127.0	4899.1		

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Hydrocarbon Laboratory Manager

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Quality Assurance:



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n-Butane	1.803	4.207	0.567			
Iso-Pentane	0.496	1.437	0.181			
n-Pentane	0.555	1.608	0.200			
i-Hexanes	0.228	0.775	0.092			
n-Hexane	0.138	0.483	0.058			
Benzene	0.060	0.189	0.017			
Cyclohexane	0.073	0.250	0.025			
i-Heptanes	0.152	0.562	0.061			
n-Heptane	0.038	0.155	0.018			
Toluene	0.064	0.237	0.022			
i-Octanes	0.092	0.392	0.041			
n-Octane	0.013	0.059	0.007			
Ethylbenzene	0.009	0.038	0.004			
Xylenes	0.015	0.065	0.006			
i-Nonanes	0.020	0.095	0.009			
n-Nonane	0.004	0.023	0.002			
Decane Plus	0.014	0.091	0.006			
	100.000	100.000	5.794			
	Calculated Physical Properties Total			C10+		
	Calculated Molecular Weight 24.91		24.91	133.69		
GPA 2172 Calculat						
Calculated Gross E	BTU per ft³ @	14.65 psi				
Real Gas Dry BTU	Real Gas Dry BTU		1147.1	6954.0		
Water Sat. Gas Bas	e BTU		1127.0	6832.3		
Relative Density Rea	al Gas		0.8629	4.6181		
Compressibility Fact	tor		0.9959			

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Hydrocarbon Laboratory Manager

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Quality Assurance:

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.

<u>District I</u> 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 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 51345

QI	UESTIONS	
Operator:		OGRID:
LEGACY RESERVES OPERATING, LP 15 Smith Road		240974 Action Number:
Midland, TX 79705		51345
		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 t	these issues before continuing wit	h the rest of the questions.
Incident Well	Not answered.	
Incident Facility	[fAPP2126433978] Hamon	Federal Com
Determination of Reporting Requirements		
Answer all questions that apply. The Reason(s) statements are calculated based on your answers an		•
Was or is this venting and/or flaring caused by an emergency or malfunction Did or will this venting and/or flaring last eight hours or more cumulatively within	Yes	
any 24-hour period from a single event	Yes	
Is this considered a submission for a venting and/or flaring 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 ve	enting 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	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.	0.5	
Methane (CH4) percentage	65	
Nitrogen (N2) percentage, if greater than one percent	4	
Hydrogen Sulfide (H2S) PPM, rounded up	20	
Carbon Dioxide (C02) percentage, if greater than one percent	11	
Oxygen (02) percentage, if greater than one percent	0	
If you are venting and/or flaring because of Pipeline Specification, please provide the required specification.	ifications for each gas.	
Methane (CH4) percentage quality requirement	Not answered.	
Nitrogen (N2) percentage quality requirement	Not answered.	
Hydrogen Sufide (H2S) PPM quality requirement	Not answered.	
Carbon Dioxide (C02) percentage quality requirement	Not answered.	
Oxygen (02) percentage quality requirement	Not answered.	
Date(s) and Time(s)		
Date venting and/or flaring was discovered or commenced	09/19/2021	
Time venting and/or flaring was discovered or commenced	12:00 AM	
Time venting and/or flaring was terminated	12:00 AM	
Cumulative hours during this event	24	

Not answered.

Natural Gas Vented (Mcf) Details

Measured or Estimated Volume of Vented or Flared Natural Gas

Natural Gas Flared (Mcf) Details	Cause: Midstream Emergency Maintenance Separator Natural Gas Flared Released: 450 Mcf Recovered: 0 Mcf Lost: 450 Mcf]
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 or is this venting and/or flaring a result of downstream activity	Yes			
Was notification of downstream activity received by you or your operator	Yes			
Downstream OGRID that should have notified you or your operator	[24650] TARGA MIDSTREAM SERVICES LLC			
Date notified of downstream activity requiring this venting and/or flaring	09/19/2021			
Time notified of downstream activity requiring this venting and/or flaring	12:00 AM			

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 and/or flaring	Communicate with sales pipeline for anticipated date of return service.		
Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring	Communicate with sales pipeline for anticipated date of return service.		

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CONDITIONS

Action 51345

CONDITIONS

Operator:	OGRID:
LEGACY RESERVES OPERATING, LP	240974
15 Smith Road	Action Number:
Midland, TX 79705	51345
	Action Type:
	[C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
reyesm01	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.	9/23/2021