



## Certificate of Analysis

Number: 6030-21100297-007A

Artesia Laboratory

200 E Main St.  
Artesia, NM 88210  
Phone 575-746-3481Zach LaCount  
Mewbourne Oil Company  
4801 Business Park Blvd  
Hobbs, NM 88240

Nov. 04, 2021

Station Name: Fuller 13/12 Battery VRT

Station Number: N/A

Station Location: Mewbourne

Sample Point: VRT

Instrument: 6030\_GC2 (Agilent GC-7890B)

Last Inst. Cal.: 09/13/2021 15:05 PM

Analyzed: 11/02/2021 08:51:09 by EJH

Sampled By: Michael Mirabal

Sample Of: Gas Spot

Sample Date: 10/28/2021 02:26

Sample Conditions: 40 psig Ambient: 71 °F

Effective Date: 10/28/2021 02:26

Method: GPA 2286

Cylinder No: 5030-00454

## Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.696 psia	
Hydrogen Sulfide	0.000	0.00000	0.000		GPM TOTAL C2+ 22.641
Nitrogen	1.916	1.89500	1.300		GPM TOTAL C3+ 16.898
Methane	23.639	23.38200	9.183		GPM TOTAL iC5+ 4.388
Carbon Dioxide	0.130	0.12900	0.139		
Ethane	21.436	21.20300	15.608	5.743	
Propane	24.846	24.57600	26.531	6.857	
Iso-butane	4.705	4.65400	6.622	1.542	
n-Butane	13.016	12.87500	18.320	4.111	
Iso-pentane	3.013	2.98000	5.264	1.104	
n-Pentane	3.705	3.66500	6.474	1.346	
Hexanes Plus	4.692	4.64100	10.559	1.938	
	101.098	100.00000	100.000	22.641	

## Calculated Physical Properties

Relative Density Real Gas

## Total

1.4309

## C6+

3.1951

Calculated Molecular Weight

40.85

92.54

Compressibility Factor

0.9848

## GPA 2172 Calculation:

Calculated Gross BTU per ft<sup>3</sup> @ 14.696 psia & 60°F

Real Gas Dry BTU

2335

5004

Water Sat. Gas Base BTU

2294

4917

Ideal, Gross HV - Dry at 14.696 psia

2299.5

5004.0

Ideal, Gross HV - Wet

2259.4

0.000

Comments: H2S Field Content 0 ppm

Data reviewed by: Krystle Fitzwater, 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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Nov. 04, 2021

Station Name: Fuller 13/12 Battery VRT  
Station Number: N/A  
Station Location: Mewbourne  
Sample Point: VRT  
Analyzed: 11/04/2021 06:03:39 by EJRSampled By: Michael Mirabal  
Sample Of: Gas Spot  
Sample Date: 10/28/2021 02:26  
Sample Conditions: 40 psig  
Method: GPA 2286  
Cylinder No: 5030-00454

## Analytical Data

Components	Mol. %	Wt. %	GPM at 14.696 psia
Hydrogen Sulfide	0.000	0.000	
Nitrogen	1.895	1.300	
Methane	23.382	9.183	
Carbon Dioxide	0.129	0.139	
Ethane	21.203	15.608	5.743
Propane	24.576	26.531	6.857
Iso-Butane	4.654	6.622	1.542
n-Butane	12.875	18.320	4.111
Iso-Pentane	2.980	5.264	1.104
n-Pentane	3.665	6.474	1.346
i-Hexanes	1.160	2.404	0.472
n-Hexane	0.817	1.719	0.340
Benzene	0.056	0.105	0.016
Cyclohexane	0.401	0.824	0.138
i-Heptanes	0.866	1.996	0.360
n-Heptane	0.293	0.722	0.137
Toluene	0.086	0.195	0.029
i-Octanes	0.712	1.833	0.320
n-Octane	0.065	0.184	0.034
Ethylbenzene	0.004	0.007	0.002
Xylenes	0.043	0.114	0.017
i-Nonanes	0.113	0.336	0.057
n-Nonane	0.017	0.053	0.010
Decanes Plus	0.008	0.067	0.006
	100.000	100.000	22.641



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Sample Of: Gas Spot  
Sample Date: 10/28/2021 02:26  
Sample Conditions: 40 psig  
Method: GPA 2286  
Cylinder No: 5030-00454

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Calculated Physical Properties	Total	C10+
Calculated Molecular Weight	40.85	149.30
<b>GPA 2172 Calculation:</b>		
<b>Calculated Gross BTU per ft<sup>3</sup> @ 14.696 psia &amp; 60°F</b>		
Real Gas Dry BTU	2334.9	8240.8
Water Sat. Gas Base BTU	2294.2	7974.3
Relative Density Real Gas	1.4309	5.1548
Compressibility Factor	0.9848	
Ideal, Gross HV - Wet	2259.4	
Ideal, Gross HV - Dry at 14.696 psia	2299.5	
Net BTU Dry Gas - real gas	2146	
Net BTU Wet Gas - real gas	2109	

**Comments:** H2S Field Content 0 ppm

Data reviewed by: Krystle Fitzwater, Laboratory Manager

Quality Assurance: The above analyses are performed in accordance with ASTM, UOP, GPA guidelines for quality assurance, unless otherwise stated.

## Mewbourne Oil Company

### Natural Gas Flared Calculation Methodology

Metering low-pressure gas diverted from the Vapor Recovery Unit ("VRU") to backup flare is not technologically feasible. Gas volumes for VRU downtime events will be calculated using an average metered VRU gas to oil production ratio. This GOR is derived from available relevant data.

Average Metered VRU Gas to Oil Production GOR = 0.18 Mcf/BBL

Flared gas volume = GOR \* Oil Production Volume (BBL)

**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 63239

**QUESTIONS**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 63239
	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	[fAPP2125737241] FULLER 13/12 BATTERY

**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	Yes
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, 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 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	Other (Specify)
Additional details for Equipment Involved. Please specify	VRU

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

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

Methane (CH4) percentage	23
Nitrogen (N2) percentage, if greater than one percent	2
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (CO2) percentage, if greater than one percent	0
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	11/13/2021
Time venting and/or flaring was discovered or commenced	12:00 AM
Time venting and/or flaring was terminated	09:00 AM
Cumulative hours during this event	9

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

Natural Gas Vented (Mcf) Details	Not answered.
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Natural Gas Flared (Mcf) Details	Cause: Equipment Failure   Other (Specify)   Natural Gas Flared   Released: 78 Mcf   Recovered: 0 Mcf   Lost: 78 Mcf
Other Released Details	Not answered.
Additional details for Measured or Estimated Volume(s). Please specify	Volume calculated
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	Not answered.
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	VRU malfunctioned
Steps taken to limit the duration and magnitude of venting and/or flaring	Repaired VRU
Corrective actions taken to eliminate the cause and reoccurrence of venting and/or flaring	Continued routine preventive maintenance and daily operational inspections

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CONDITIONS  
  
Action 63239

CONDITIONS

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 63239
	Action Type: [C-129] Venting and/or Flaring (C-129)

CONDITIONS

Created By	Condition	Condition Date
zlaount	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.	11/23/2021