



# Certificate of Analysis

Number: 6030-21100303-003A

**Artesia Laboratory**  
 200 E Main St.  
 Artesia, NM 88210  
 Phone 575-746-3481

Zach LaCount  
 Mewbourne Oil Company  
 4801 Business Park Blvd  
 Hobbs, NM 88240

Nov. 02, 2021

Station Name: Winter Fell/Castle Black	Sampled By: Chad Whitt
Station Number: N/A	Sample Of: Gas Spot
Station Location: Mewbourne	Sample Date: 10/28/2021
Sample Point: Meter Run	Sample Conditions: 99.8 psig, @ 62.6 °F Ambient: 54 °F
Instrument: 6030_GC2 (Agilent GC-7890B)	Effective Date: 10/28/2021
Last Inst. Cal.: 09/13/2021 14:54 PM	Method: GPA 2286
Analyzed: 11/02/2021 05:18:46 by EJР	Cylinder No: 5030-01265

## Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.696 psia	
Hydrogen Sulfide	0.000	0.00700	0.007		GPM TOTAL C2+ 19.802
Nitrogen	0.489	0.48200	0.390		GPM TOTAL C3+ 12.430
Methane	30.862	30.42700	14.107		GPM TOTAL iC5+ 1.537
Carbon Dioxide	0.173	0.17100	0.217		
Ethane	27.730	27.34000	23.758	7.372	
Propane	26.338	25.96700	33.093	7.213	
Iso-butane	3.603	3.55200	5.966	1.172	
n-Butane	8.002	7.88900	13.251	2.508	
Iso-pentane	1.735	1.71100	3.568	0.631	
n-Pentane	1.242	1.22500	2.554	0.448	
Hexanes Plus	1.247	1.22900	3.089	0.458	
	<u>101.421</u>	<u>100.00000</u>	<u>100.000</u>	<u>19.802</u>	

<b>Calculated Physical Properties</b>	<b>Total</b>	<b>C6+</b>
Relative Density Real Gas	1.2071	2.9928
Calculated Molecular Weight	34.60	86.68
Compressibility Factor	0.9893	
<b>GPA 2172 Calculation:</b>		
<b>Calculated Gross BTU per ft³ @ 14.696 psia &amp; 60°F</b>		
Real Gas Dry BTU	2013	4581
Water Sat. Gas Base BTU	1978	4501
Ideal, Gross HV - Dry at 14.696 psia	1991.3	4580.9
Ideal, Gross HV - Wet	1956.5	0.000

**Comments:** H2S Field Content 65 ppm  
 Mcf/day 163.4

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. 02, 2021

Station Name: Winter Fell/Castle Black  
 Station Number: N/A  
 Station Location: Mewbourne  
 Sample Point: Meter Run  
 Analyzed: 11/02/2021 07:19:56 by EJR

Sampled By: Chad Whitt  
 Sample Of: Gas Spot  
 Sample Date: 10/28/2021  
 Sample Conditions: 99.8 psig, @ 62.6 °F  
 Method: GPA 2286  
 Cylinder No: 5030-01265

**Analytical Data**

Components	Mol. %	Wt. %	GPM at 14.696 psia
Hydrogen Sulfide	0.007	0.007	
Nitrogen	0.482	0.390	
Methane	30.427	14.107	
Carbon Dioxide	0.171	0.217	
Ethane	27.340	23.758	7.372
Propane	25.967	33.093	7.213
Iso-Butane	3.552	5.966	1.172
n-Butane	7.889	13.251	2.508
Iso-Pentane	1.711	3.568	0.631
n-Pentane	1.225	2.554	0.448
i-Hexanes	0.363	0.876	0.144
n-Hexane	0.116	0.291	0.048
Benzene	0.233	0.521	0.065
Cyclohexane	0.138	0.335	0.047
i-Heptanes	0.189	0.495	0.074
n-Heptane	0.019	0.056	0.009
Toluene	0.055	0.146	0.018
i-Octanes	0.088	0.265	0.039
n-Octane	0.004	0.013	0.002
Ethylbenzene	0.005	0.017	0.002
Xylenes	0.005	0.014	0.002
i-Nonanes	0.011	0.042	0.006
n-Nonane	0.002	0.006	0.001
Decanes Plus	0.001	0.012	0.001
	<u>100.000</u>	<u>100.000</u>	<u>19.802</u>



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Nov. 02, 2021

Station Name: Winter Fell/Castle Black  
Station Number: N/A  
Station Location: Mewbourne  
Sample Point: Meter Run  
Analyzed: 11/02/2021 07:19:56 by EJR

Sampled By: Chad Whitt  
Sample Of: Gas Spot  
Sample Date: 10/28/2021  
Sample Conditions: 99.8 psig, @ 62.6 °F  
Method: GPA 2286  
Cylinder No: 5030-01265

Calculated Physical Properties	Total	C10+
Calculated Molecular Weight	34.60	156.31
<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	2012.8	8580.8
Water Sat. Gas Base BTU	1977.7	8340.8
Relative Density Real Gas	1.2071	5.3970
Compressibility Factor	0.9893	
Ideal, Gross HV - Wet	1956.5	
Ideal, Gross HV - Dry at 14.696 psia	1991.3	
Net BTU Dry Gas - real gas	1846	
Net BTU Wet Gas - real gas	1814	

**Comments:** H2S Field Content 65 ppm  
Mcf/day 163.4

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)

Sante Fe Main Office  
Phone: (505) 476-3441

General Information  
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Online Phone Directory  
<https://www.emnrd.nm.gov/ocd/contact-us>

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

DEFINITIONS

Action 478526

**DEFINITIONS**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 478526
	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 478526

**QUESTIONS**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 478526
	Action Type: [C-129] Venting and/or Flaring (C-129)

**QUESTIONS**

<b>Prerequisites</b> <i>Any messages presented in this section, will prevent submission of this application. Please resolve these issues before continuing with the rest of the questions.</i>	
Incident Well	Unavailable.
Incident Facility	[fAPP2331757142] IRON ISLAND 11-7 BATTERY #1

<b>Determination of Reporting Requirements</b> <i>Answer all questions that apply. The Reason(s) statements are calculated based on your answers and may provide additional guidance.</i>	
Was this vent or flare caused by an emergency or malfunction	Yes
Did this vent or flare last eight hours or more cumulatively within any 24-hour period from a single event	Yes
Is this considered a submission for a vent or flare event	Yes, minor venting and/or flaring of natural gas.
<i>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.</i>	
Was there <b>at least 50 MCF</b> of natural gas vented and/or flared during this event	Yes
Did this vent or flare result in the release of <b>ANY</b> 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

<b>Equipment Involved</b>	
Primary Equipment Involved	Other (Specify)
Additional details for Equipment Involved. Please specify	VRU

<b>Representative Compositional Analysis of Vented or Flared Natural Gas</b> <i>Please provide the mole percent for the percentage questions in this group.</i>	
Methane (CH4) percentage	30
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	0
Oxygen (O2) percentage, if greater than one percent	0
<i>If you are venting and/or flaring because of Pipeline Specification, please provide the required specifications for each gas.</i>	
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 478526

**QUESTIONS (continued)**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 478526
	Action Type: [C-129] Venting and/or Flaring (C-129)

**QUESTIONS**

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	06/20/2025
Time vent or flare was discovered or commenced	12:00 AM
Time vent or flare was terminated	12:00 PM
Cumulative hours during this event	12

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	<i>Not answered.</i>
Natural Gas Flared (Mcf) Details	Cause: Equipment Failure   Other (Specify)   Natural Gas Flared   Released: 82 Mcf   Recovered: 0 Mcf   Lost: 82 Mcf.
Other Released Details	<i>Not answered.</i>
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 this vent or flare a result of downstream activity	No
Was notification of downstream activity received by this operator	<i>Not answered.</i>
Downstream OGRID that should have notified this operator	<i>Not answered.</i>
Date notified of downstream activity requiring this vent or flare	<i>Not answered.</i>
Time notified of downstream activity requiring this vent or flare	<i>Not answered.</i>

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	VRU malfunctioned
Steps taken to limit the duration and magnitude of vent or flare	Repaired VRU
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Continued routine preventive maintenance and daily operational inspections





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ACKNOWLEDGMENTS

Action 478526

**ACKNOWLEDGMENTS**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 478526
	Action Type: [C-129] Venting and/or Flaring (C-129)

**ACKNOWLEDGMENTS**

<input checked="" type="checkbox"/>	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 <b>complete</b> C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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.
<input checked="" type="checkbox"/>	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 478526

**CONDITIONS**

Operator: MEWBOURNE OIL CO P.O. Box 5270 Hobbs, NM 88241	OGRID: 14744
	Action Number: 478526
	Action Type: [C-129] Venting and/or Flaring (C-129)

**CONDITIONS**

Created By	Condition	Condition Date
zlacount	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.	6/24/2025