



## Certificate of Analysis

Number: 6030-21120207-001A

Artesia Laboratory

200 E Main St.

Artesia, NM 88210

Phone 575-746-3481

Redwood  
Redwood  
4910 N. Midkiff Rd.  
Midland, TX 79705

Dec. 20, 2021

Station Name: Sterling Battery Product

Station Number: 67733009

Station Location: Redwood

Sample Point: Meter run

Instrument: 70142339 (Inficon GC-MicroFusion)

Last Inst. Cal.: 12/13/2021 0:00 AM

Analyzed: 12/20/2021 10:40:27 by ERG

Sampled By: Michael Mirabal

Sample Of: Gas Spot

Sample Date: 12/18/2021 08:39

Sample Conditions: 84 psig, @ 51 °F Ambient: 37 °F

Effective Date: 12/18/2021 08:39

Method: GPA-2261M

Cylinder No: 5030-04690

## Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.696 psia
Hydrogen Sulfide	NIL	1.00000	1.393	
Nitrogen	2.008	1.99348	2.283	
Carbon Dioxide	2.169	2.15374	3.874	
Methane	66.314	65.84699	43.180	
Ethane	15.662	15.55172	19.114	4.169
Propane	7.738	7.68366	13.849	2.122
Iso-Butane	1.003	0.99545	2.365	0.326
n-Butane	2.368	2.35094	5.585	0.743
Iso-Pentane	0.614	0.60918	1.797	0.223
n-Pentane	0.655	0.65079	1.919	0.236
Hexanes	0.485	0.48119	1.695	0.198
Heptanes	0.461	0.45736	1.873	0.211
Octanes	0.191	0.19005	0.887	0.098
Nonanes Plus	0.036	0.03545	0.186	0.020
	99.704	100.00000	100.000	8.346

## Calculated Physical Properties

Calculated Molecular Weight      Total      C9+

Compressibility Factor      0.9952      128.26

Relative Density Real Gas      0.8485      4.4283

## GPA 2172 Calculation:

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

Real Gas Dry BTU      1368.5      6996.3

Water Sat. Gas Base BTU      1345.1      6874.3

Ideal, Gross HV - Dry at 14.696 psia      1361.9      6996.3

Ideal, Gross HV - Wet      1338.0      6874.3

Comments: H2S Field Content 1 %  
Mcf/day 173

Hydrocarbon Laboratory Manager

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

**STIRLING FLARE**

Location 32.765163 -104.32

Meter Type	Prod Date	Entry Date	Disposition	Product	UOM	Volume	Vol Rate	Energy Factor	Energy	Flow Temp	Gas Gravity	Base Temp	Base Press	Flow Press	Run Hours	Meter Begin	Meter End	Begin Date	End Date	Last Updated
FLARE	12/15/2021	12/16/2021	FLARE	GAS	MCF	195	195	1.3138	256	60	0.6	60	14.73	25	24	542,231	542,426	12/15/2021 0:00	12/15/2021 0:00	DAKOTABOLEN
FLARE	12/14/2021	12/15/2021	FLARE	GAS	MCF	168	168	1.3138	220.72	60	0.6	60	14.73	25	24	542,063	542,231	12/14/2021 0:00	12/14/2021 0:00	DAKOTABOLEN
FLARE	12/13/2021	12/14/2021	FLARE	GAS	MCF	181	181	1.3138	237.8	60	0.6	60	14.73	25	24	541,882	542,063	12/13/2021 0:00	12/13/2021 0:00	DAKOTABOLEN

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

DEFINITIONS

Action 68061

**DEFINITIONS**

Operator: Redwood Operating LLC PO Box 1370 Artesia, NM 88211370	OGRID: 330211
	Action Number: 68061
	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 68061

**QUESTIONS**

Operator: Redwood Operating LLC PO Box 1370 Artesia, NM 88211370	OGRID: 330211
	Action Number: 68061
	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	[30-015-21528] STIRLING #001
Incident Facility	Not answered.

<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	No
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 at least 50 MCF of natural gas vented and/or flared during this event	Yes
Did this vent or flare 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 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	Not answered.
Additional details for Equipment Involved. Please specify	Not answered.

<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	66
Nitrogen (N2) percentage, if greater than one percent	2
Hydrogen Sulfide (H2S) PPM, rounded up	1
Carbon Dioxide (CO2) percentage, if greater than one percent	2
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 68061

**QUESTIONS (continued)**

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**QUESTIONS**

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	12/15/2021
Time vent or flare was discovered or commenced	12:00 AM
Time vent or flare was terminated	11:59 PM
Cumulative hours 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 Scheduled Maintenance   Pipeline (Any)   Natural Gas Flared   Released: 195 Mcf   Recovered: 0 Mcf   Lost: 195 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 this vent or flare a result of downstream activity	No
Was notification of downstream activity received by this operator	Not answered.
Downstream OGRID that should have notified this operator	Not answered.
Date notified of downstream activity requiring this vent or flare	Not answered.
Time notified of downstream activity requiring this vent or flare	Not answered.

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.	False
Please explain reason for why this event was beyond this operator's control	DCP scheduled Artesia Plant Maintenance
Steps taken to limit the duration and magnitude of vent or flare	During flaring Redwood only flares newer/higher oil production wells and shut in all smaller/older production
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Flaring was caused from DCP scheduled Artesia Plant Maintenance unfortunately the only thing we can do is continue communication with midstream operator

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ACKNOWLEDGMENTS

Action 68061

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	Action Number: 68061
	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 68061

**CONDITIONS**

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	Action Number: 68061
	Action Type: [C-129] Venting and/or Flaring (C-129)

**CONDITIONS**

Created By	Condition	Condition Date
dweaver	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.	12/20/2021