



Certificate of Analysis

Number: 6030-21080313-001A

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

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

Sep. 01, 2021

Station Name: Hawk 9H CTB Test 1
Station Number: 5420035
Station Location: Redwood
Sample Point: Meter run
Instrument: 6030_GC6 (Inficon GC-3000 Micro)
Last Inst. Cal.: 08/02/2021 0:00 AM
Analyzed: 09/01/2021 05:09:18 by KNF

Sampled By: Michael Mirabal
Sample Of: Gas Spot
Sample Date: 08/28/2021 02:57
Sample Conditions: 54 psia, @ 109 °F Ambient: 86 °F
Effective Date: 08/28/2021 02:57
Method: GPA-2261M
Cylinder No: 5030-04739

Analytical Data

Components	Un-normalized Mol %	Mol. %	Wt. %	GPM at 14.696 psia		
Nitrogen	1.822	1.83370	2.004		GPM TOTAL C2+	9.080
Methane	64.116	64.53536	40.398		GPM TOTAL C3+	5.136
Carbon Dioxide	2.630	2.64678	4.545		GPM TOTAL iC5+	1.434
Ethane	14.609	14.70416	17.252	3.944		
Propane	8.260	8.31428	14.305	2.297		
Iso-butane	1.256	1.26411	2.867	0.415		
n-Butane	3.111	3.13083	7.100	0.990		
Iso-pentane	0.859	0.86431	2.433	0.317		
n-Pentane	0.902	0.90749	2.555	0.330		
Hexanes Plus	1.787	1.79898	6.541	0.787		
	99.352	100.00000	100.000	9.080		

Calculated Physical Properties

	Total	C6+
Relative Density Real Gas	0.8893	3.2176
Calculated Molecular Weight	25.63	93.19
Compressibility Factor	0.9946	

GPA 2172 Calculation:

Calculated Gross BTU per ft³ @ 14.696 psia & 60°F

Real Gas Dry BTU	1435	5129
Water Sat. Gas Base BTU	1411	5040
Ideal, Gross HV - Dry at 14.696 psia	1427.7	5129.2
Ideal, Gross HV - Wet	1402.8	5039.7

Comments: H2S Field Content 2.0 %
Mcf/day 305

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.

Hawk 9H CTB
Facility ID: fAPP2205436169
Location 32.7685780 -104.2931884 A 8-18S-27E 347 FNL 373 FEL

Reference ID	Prod Date	Entry Date	Disposition	Product	UOM	Volume	Calculated Vol*14.73/15.025	Energy Factor	Flow Temp	Gas Gravity	Base Temp	Base Press	Flow Press	Run Hours	Meter Begin	Meter End	Begin Date	End Date	Last Updated
	2/3/2022	2/4/2022	FLARE	GAS	MCF	359	352	1	60	0.6	60	14.73	22	24	33,038	33,397	2/3/2022 0:00	2/3/2022 0:00	MARTYQUIROZ

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

DEFINITIONS

Action 88687

DEFINITIONS

Operator: Redwood Operating LLC PO Box 1370 Artesia, NM 88210	OGRID: 330211
	Action Number: 88687
	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 88687

QUESTIONS

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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	[fAPP2205436169] Hawk 9H CTB

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 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	No
Is this considered a submission for a vent or flare 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 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 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.	
Methane (CH4) percentage	65
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	3
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.

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QUESTIONS, Page 2

Action 88687

QUESTIONS (continued)

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QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	02/03/2022
Time vent or flare was discovered or commenced	03:00 AM
Time vent or flare was terminated	08:00 AM
Cumulative hours during this event	5

Measured or Estimated Volume of Vented or Flared Natural Gas	
Natural Gas Vented (Mcf) Details	Not answered.
Natural Gas Flared (Mcf) Details	Cause: Freeze Pipeline (Any) Natural Gas Flared Released: 352 Mcf Recovered: 0 Mcf Lost: 352 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.	True
Please explain reason for why this event was beyond this operator's control	Gas Line Froze Up
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 Gas Line Freezing

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ACKNOWLEDGMENTS

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ACKNOWLEDGMENTS

☒	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 complete C-129 submission per 19.15.27.8 and 19.15.28.8 NMAC.
☒	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.
☒	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.
☒	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.
☒	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

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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.	3/9/2022