

**ARMSTRONG GAS LABS, INC.**

P.O. Box 988
 Monahans, Texas 79756
 (432) 943-8844 (FAX) 943-8855

GAS ANALYSIS REPORT

Analysis No.: 321456
 Customer: Centennial

<u>Component</u>	<u>Mol. %</u>	<u>(Ideal)</u> <u>BTU</u>	<u>(Ideal)</u> <u>SG</u>	<u>(Real)</u> <u>GPM</u>	
Nitrogen	2.3155	0.000	0.022		
Methane	78.1518	786.862	0.433		
CO2	2.4721	0.000	0.038		
Ethane	9.9095	174.820	0.103	2.644	
H2S	0.0100	0.000	0.000		
Propane	4.1191	103.316	0.063	1.132	
Iso-Butane	0.5296	17.168	0.011	0.173	
Butane	1.3471	43.809	0.027	0.424	
Iso-Pentane	0.3264	13.018	0.008	0.119	
Pentane	0.3251	12.991	0.008	0.118	
Hexanes C6+	0.4938	25.249	0.016	0.215	
Hydrogen	N/A				
Helium	N/A				
Oxygen	N/A				
CO	N/A				
Totals	100.0000	1177.234	0.728	4.825	

Producer: Centennial
Well / Sta. Name: Raider Federal 301H
Sta. No.: 0068
Formation:
Field: New Mexico
County:
API Number: 3002543401

Spot / Composite: SP
 Date / Time On:
 Date / Time Off: 05/07/22
 Date to Lab: 05/09/22
 Date Analyzed: 05/09/22
 Effective Date:

Sample Press. (PSIG): 72
 Line Press. (PSIG): 72
 Sample Temp. (F): 70
 Fl. Gas Temp. (F): 70
 Amb. Temp. (F): 72

Del. To:
 Sampled By: JL
 Cylinder No.: AGL-681

Field H2O (#/mm):

Field H2S (PPM): 100.0
 Field H2S (Grains): 6.29

Pressure Base: 14.65
Temp. Base: 60

Z Factor (Dry): 0.9966514
 Z Factor (Act.): 0.9966514

Dry BTU w/ H2S: 1181.25
 Sat BTU w/ H2S: 1161.02
 As Del. BTU w/ H2S: 1181.25

Dry BTU W/O H2S (Real): 1181.19

Sat. BTU W/O H2S (Real): 1160.96

H2O (# / mmcf): 0.0

AS DEL. BTU W/O H2S (Real): 1181.19

BTU Calc: Dry

Sp. Gravity (Real): 0.7305

Field Gravity:
 Lab Gravitometer:

GPM Ethane+ (Real): 4.825
GPM Propane+ (Real): 2.181
GPM IC5+ (Real): 0.452

GPA 2145 / 2172

Fld. Remarks: FLOW RATE 1735

Lab Remarks:

Preliminary Production Data

<u>Well Name</u>	<u>Production Date</u>	<u>Gas Flare</u>
Raider 21 Battery 2	3/22/2023	89 mcf

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District IV
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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

DEFINITIONS

Action 203084

DEFINITIONS

Operator: Permian Resources Operating, LLC 1001 17th Street, Suite 1800 Denver, CO 80202	OGRID: 372165
	Action Number: 203084
	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 203084

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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	Unavailable.
Incident Facility	[fAPP2220951388] Raider 21 Battery 2

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	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.
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 within 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	78
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	2
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

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QUESTIONS (continued)

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QUESTIONS

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	03/22/2023
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: Equipment Failure Tank (Any) Natural Gas Flared Released: 89 Mcf Recovered: 0 Mcf Lost: 89 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	VRU down for o2
Steps taken to limit the duration and magnitude of vent or flare	Open valves to divert gas to a second midstream company to relive pressure off the line.
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	Clear consistent communication with midstream provider.

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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
chcentennial	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.	4/2/2023