



# Certificate of Analysis

Number: 5030-22100031-001A

**Midland Laboratory**  
 2200 East I-20  
 Midland, TX 79706  
 Phone 432-689-7252

Joey Cowley  
 Ram Energy  
 1103 N. Eva Avenue  
 Monahans, TX 79756

Oct. 03, 2022

Station Name: CATTLEMAN 4 114H  
 Method: GPA-2261  
 Cylinder No: 1111-007891  
 Analyzed: 10/03/2022 13:52:03 by MGN

Sampled By: DERRICK BARRIENTOS  
 Sample Of: Gas Spot  
 Sample Date: 09/25/2022 15:00  
 Sample Conditions: 226.5 psig, @ 118.1 °F

## Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	0.0000	0.0000		GPM TOTAL C2+	4.487
Nitrogen	1.1539	1.3076		GPM TOTAL C3+	2.411
Carbon Dioxide	15.5785	27.7332		GPM TOTAL iC5+	0.672
Methane	67.8068	44.0020			
Ethane	7.7782	9.4608	2.0765		
Propane	3.7569	6.7012	1.0332		
Iso-butane	0.7583	1.7828	0.2477		
n-Butane	1.4559	3.4230	0.4582		
Iso-pentane	0.5557	1.6218	0.2029		
n-Pentane	0.4573	1.3346	0.1655		
Hexanes Plus	0.6985	2.6330	0.3042		
	100.0000	100.0000	4.4882		

Calculated Physical Properties	Total	C6+
Relative Density Real Gas	0.8566	3.2176
Calculated Molecular Weight	24.72	93.19
Compressibility Factor	0.9961	

**GPA 2172 Calculation:**

**Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia & 60°F**

Real Gas Dry BTU	1066	5113
Water Sat. Gas Base BTU	1048	5024

**Comments:** H2S Field Content 0 ppm

Data reviewed by: Marco Barrientos

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



# Certificate of Analysis

Number: 5030-22100031-002A

**Midland Laboratory**

2200 East I-20  
Midland, TX 79706  
Phone 432-689-7252

Joey Cowley  
Ram Energy  
1103 N. Eva Avenue  
Monahans, TX 79756

Oct. 03, 2022

Station Name: NORTH 17 SALES  
Method: GPA-2261  
Cylinder No: 1111-008598  
Analyzed: 10/03/2022 13:52:03 by MGN

Sampled By: DERRICK BARRIENTOS  
Sample Of: Gas Spot  
Sample Date: 09/30/2022 13:30  
Sample Conditions: 177.5 psig, @ 98 °F

## Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	0.0000	0.0000		GPM TOTAL C2+	7.558
Nitrogen	1.3036	1.4838		GPM TOTAL C3+	4.328
Carbon Dioxide	4.4637	7.9821		GPM TOTAL iC5+	1.075
Methane	68.2254	44.4730			
Ethane	12.0884	14.7695	3.2298		
Propane	7.3383	13.1483	2.0198		
Iso-butane	1.0979	2.5929	0.3589		
n-Butane	2.7738	6.5508	0.8736		
Iso-pentane	0.7236	2.1213	0.2644		
n-Pentane	0.7476	2.1917	0.2707		
Hexanes Plus	1.2377	4.6866	0.5395		
	100.0000	100.0000	7.5567		

Calculated Physical Properties	Total	C6+
Relative Density Real Gas	0.8535	3.2176
Calculated Molecular Weight	24.61	93.19
Compressibility Factor	0.9953	
<b>GPA 2172 Calculation:</b>		
<b>Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia &amp; 60°F</b>		
Real Gas Dry BTU	1338	5113
Water Sat. Gas Base BTU	1316	5024

**Comments:** H2S Field Content 0 ppm

Data reviewed by: Marco Barrientos

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



# Certificate of Analysis

Number: 5030-22100031-003A

**Midland Laboratory**

2200 East I-20  
Midland, TX 79706  
Phone 432-689-7252

Joey Cowley  
Ram Energy  
1103 N. Eva Avenue  
Monahans, TX 79756

Oct. 03, 2022

Station Name: CATTLEMAN 4 204H  
Method: GPA-2261  
Cylinder No: 5030-00208  
Analyzed: 10/03/2022 13:52:13 by MGN

Sampled By: DERRICK BARRIENTOS  
Sample Of: Gas Spot  
Sample Date: 09/29/2022 15:00  
Sample Conditions: 231.5 psig, @ 120.2 °F

## Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia		
Hydrogen Sulfide	0.0000	0.0000		GPM TOTAL C2+	4.276
Nitrogen	1.6156	1.9318		GPM TOTAL C3+	2.337
Carbon Dioxide	11.1165	20.8821		GPM TOTAL iC5+	0.734
Methane	72.6827	49.7696			
Ethane	7.2648	9.3240	1.9390		
Propane	3.1484	5.9258	0.8656		
Iso-butane	0.8942	2.2184	0.2920		
n-Butane	1.4136	3.5069	0.4448		
Iso-pentane	0.6406	1.9728	0.2338		
n-Pentane	0.4436	1.3661	0.1605		
Hexanes Plus	0.7800	3.1025	0.3397		
	100.0000	100.0000	4.2754		

Calculated Physical Properties	Total	C6+
Relative Density Real Gas	0.8116	3.2176
Calculated Molecular Weight	23.43	93.19
Compressibility Factor	0.9963	

**GPA 2172 Calculation:**

**Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia & 60°F**

Real Gas Dry BTU	1101	5113
Water Sat. Gas Base BTU	1082	5024

**Comments:** H2S Field Content 0 ppm

Data reviewed by: Marco Barrientos

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



Certificate of Analysis

Number: 5030-22100031-004A

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1103 N. Eva Avenue  
Monahans, TX 79756

Oct. 03, 2022

Station Name: LD2 SOUTH BLOCK 212H  
Method: GPA-2261  
Analyzed: 10/03/2022 13:52:13 by MGN

Sampled By: DERRICK BARRIENTES  
Sample Of: Gas Spot  
Sample Date: 09/30/2022 15:00  
Sample Conditions: 292.4 psig, @ 108.5 °F

Analytical Data

Components	Mol. %	Wt. %	GPM at 14.65 psia	
Hydrogen Sulfide	0.0000	0.0000	GPM TOTAL C2+ 4.236	
Nitrogen	1.2322	1.5301	GPM TOTAL C3+ 2.203	
Carbon Dioxide	8.6756	16.9243	GPM TOTAL iC5+ 0.676	
Methane	75.5545	53.7276		
Ethane	7.6168	10.1521	2.0327	
Propane	3.2033	6.2612	0.8806	
Iso-butane	0.7740	1.9941	0.2527	
n-Butane	1.2492	3.2184	0.3930	
Iso-pentane	0.5063	1.6192	0.1848	
n-Pentane	0.3589	1.1478	0.1298	
Hexanes Plus	0.8292	3.4252	0.3610	
	100.0000	100.0000	4.2346	

Calculated Physical Properties	Total	C6+
Relative Density Real Gas	0.7814	3.2176
Calculated Molecular Weight	22.56	93.19
Compressibility Factor	0.9964	
<b>GPA 2172 Calculation:</b>		
<b>Calculated Gross BTU per ft<sup>3</sup> @ 14.65 psia &amp; 60°F</b>		
Real Gas Dry BTU	1122	5113
Water Sat. Gas Base BTU	1103	5024

Comments: H2S Field Content 0 ppm

Data reviewed by: Marco Barrientos

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

\*\*\*Calculations for the total Mcf flared\*\*\*  
End Meter Volume – the Begin Meter Volume.

\*\*\*Composition for the gas has been entered into the question portion of the C-129.  
If further back up is needed please let us know and will provide requested data.

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**District IV**  
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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 204973

**DEFINITIONS**

Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	OGRID: 331165
	Action Number: 204973
	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 204973

**QUESTIONS**

Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	OGRID: 331165
	Action Number: 204973
	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	[fAPP2123840667] EL CAMPEON CTB 17S

<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, major 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	Producing Well
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	68
Nitrogen (N2) percentage, if greater than one percent	1
Hydrogen Sulfide (H2S) PPM, rounded up	0
Carbon Dioxide (CO2) percentage, if greater than one percent	16
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 204973

**QUESTIONS (continued)**

Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	OGRID: 331165
	Action Number: 204973
	Action Type: [C-129] Venting and/or Flaring (C-129)

**QUESTIONS**

Date(s) and Time(s)	
Date vent or flare was discovered or commenced	11/03/2022
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: Pipeline Quality Specifications   Producing Well   Natural Gas Flared   Released: 4,500 Mcf   Recovered: 0 Mcf   Lost: 4,500 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	Unexpected O2 concentration from well
Steps taken to limit the duration and magnitude of vent or flare	Monitored gas quality until gas met pipeline specifications
Corrective actions taken to eliminate the cause and reoccurrence of vent or flare	No way to avoid periodic downtime for unforeseen conditions.



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ACKNOWLEDGMENTS

Action 204973

**ACKNOWLEDGMENTS**

Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	OGRID: 331165
	Action Number: 204973
	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 204973

**CONDITIONS**

Operator: Earthstone Operating, LLC 1400 Woodloch Forest; Ste 300 The Woodlands, TX 77380	OGRID: 331165
	Action Number: 204973
	Action Type: [C-129] Venting and/or Flaring (C-129)

**CONDITIONS**

Created By	Condition	Condition Date
kmcbride	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.	4/6/2023