



Pre Plugging Methane Quantification Test Report

Report Prepared By Curtis Shuck

Start Date: Sun Dec 15 2024 21:21:12 GMT+0000
 (Coordinated Universal Time)
End Date: Tue Dec 17 2024 20:30:50 GMT+0000
 (Coordinated Universal Time)
Test Time Subset: 2024-12-15T21:20:28.424Z -
 2024-12-17T20:30:05.864Z
Device: VB100-0054
Well Licensee: NMOCD
Well Name: Cato San Andres Unit 108
UWI: 30-005-20078
Well License Number: 39-005-20078
Surface Location: Berry Family
Bottom Hole Location: Unknown
Test Operator: CES QMS
Authorized By: NMOCD
Test Reason: IJJA FORMULA 1 PRE PLUG
Scope Of Work: 12-hour
AFE Number: 78656
GPS: 33.61805,-103.86546
Notes: CASING leaking 2 Valve

Orphan Well Flow Test Results

Average Flowrate 0.0176 scf/hr	Average Flow Temperature 48.84 °F	Average Flow Pressure 0.2981 psi	Flow Duration 2829.62 min	Methane Concentration 100 %	Methane Emissions 0.34 g/hr	Benzene 1 ppm
---	--	---	--	--	--	----------------------------

Annual Emission Rate = ($\bar{Q}_{measured}$) x (Conc $_{measured}$) x p x 0.454 x 8,760

Methane Calculation:

($\bar{Q}_{measured}$) 0.0176 scf/hr x (Conc $_{measured}$) 1 = 0.01757435 scf CH₄/hr

Methane Flow x (p) x .0423 x .454 x 8,760 = 2.9784 CH₄ kg/yr Emission Rate

Where:

$Q_{measured}$ - scf/hr total measured flow

Conc $_{measured}$ - methane concentration measured

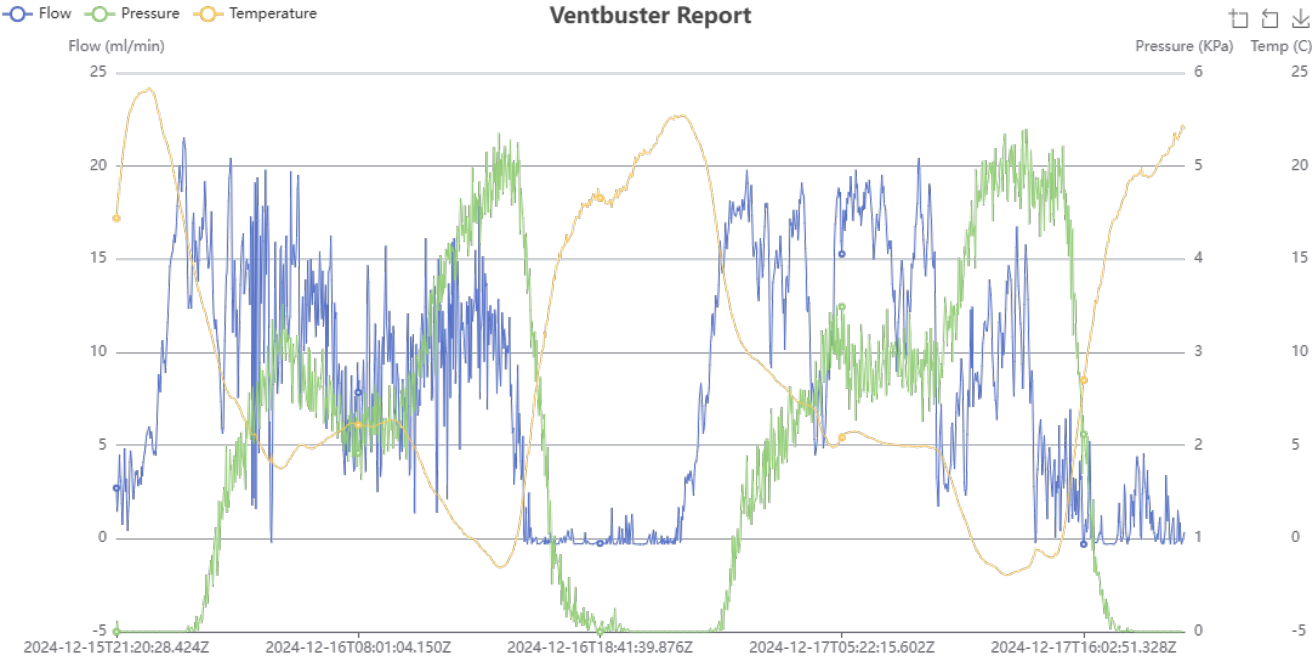
p - 0.0423 methane density at 1 atm; 60° F

0.454 - Conversion from lb to kg

8760 - Conversion from hr to yr

Flow/Pressure/Temperature Timeseries

Ventbuster Report



Site Photos



23158G	CSAU #108 Pre Plug	CSAU #108 Pre Plug	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2024103628	BAG	CES - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Dec 15, 2024 14:55	Dec 1, 2024	Dec 23, 2024 15:39	Dec 31, 2024
Date Sampled	Date Effective	Date Received	Date Reported
System Administrator			
Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI @ Temp °F Source Conditions
Well Done Foundation		NG	
Operator		Lab Source Description	

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	91.1600	91.161	
CO2 (CO2)	2.0720	2.072	
Methane (C1)	4.1780	4.178	
Ethane (C2)	0.0140	0.014	0.0040
Propane (C3)	0.1580	0.158	0.0440
I-Butane (IC4)	0.3380	0.338	0.1110
N-Butane (NC4)	0.8960	0.896	0.2820
I-Pentane (IC5)	0.6820	0.682	0.2490
N-Pentane (NC5)	0.2070	0.207	0.0750
Hexanes Plus (C6+)	0.2950	0.295	0.1280
TOTAL	100.0000	100.0010	0.8930

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Analyzer Information			
Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	Sep 9, 2024

Gross Heating Values (Real, BTU/ft³)			
14.696 PSI @ 60.00 Å°F		14.73 PSI @ 60.00 Å°F	
Dry	Saturated	Dry	Saturated
137.9	136.3	138.2	136.6

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.9955	0.9953
Molecular Weight	
28.8266	

C6+ Group Properties		
Assumed Composition		
C6 - 60.000%	C7 - 30.000%	C8 - 10.000%

PROTREND STATUS: Passed By Validator on Jan 2, 2025

DATA SOURCE: Imported

PASSED BY VALIDATOR REASON: First sample taken @ this point, composition looks reasonable

VALIDATOR:
Ashley Russell

VALIDATOR COMMENTS:
OK

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

General Information
Phone: (505) 629-6116

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 494548

DEFINITIONS

Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 494548
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

DEFINITIONS

The Orphan Well Mitigation Activity (OMA) forms are a subset of the OCD's forms exclusively designed for activities related to State of New Mexico's contracted plugging and reclamation activities. Specifically, these forms are used for orphan wells or associated facilities which are in a "Reclamation Fund Approved" status. This status represents wells or facilities where the OCD has acquired a hearing order allowing the OCD to perform plugging or reclamation on wells and associated facilities that no longer have a viable operator to perform the necessary work. These forms are not to be utilized for any other purpose.

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

General Information
Phone: (505) 629-6116

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

QUESTIONS

Action 494548

QUESTIONS

Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 494548
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

QUESTIONS

Prerequisites	
[OGRID] Well Operator	[248802] CANO PETRO OF NEW MEXICO, INC.
[API] Well Name and Number	[30-005-20078] CATO SAN ANDRES UNIT #108
Well Status	Reclamation Fund Approved

Monitoring Event Information*Please answer all the questions in this group.*

Reason For Filing	Pre-Plug Methane Monitoring
Date of monitoring	12/15/2024
Latitude	33.6179962
Longitude	-103.8655396

Monitoring Event Details*Please answer all the questions in this group.*

Flow rate in cubic meters per day (m ³ /day)	0.01
Test duration in hours (hr)	47.2
Average flow temperature in degrees Celsius (°C)	8.0
Average gauge flow pressure in kilopascals (kPag)	0.3
Methane concentration in part per million (ppm)	41,780
Methane emission rate in grams per hour (g/hr)	0.34
Testing Method	Steady State

Monitoring Contractor*Please answer all the questions in this group.*

Name of monitoring contractor	Well Done New Mexico LLC
-------------------------------	--------------------------