



Pre Plugging Methane Quantification Test Report

Report Prepared By Curtis Shuck

Start Date: Tue Dec 20 2022 21:12:30 GMT+0000
 (Coordinated Universal Time)
End Date: Wed Dec 21 2022 19:09:55 GMT+0000
 (Coordinated Universal Time)
Test Time Subset: 2022-12-20T21:12:30.000Z -
 2022-12-21T19:08:59.588Z
Device: VB100-0052
Well Licensee: NMOCD
Well Name: OBRIEN R 001
UWI: 30-005-62190
Well License Number: 30-005-62190
Surface Location: CHAVES COUNTY
Bottom Hole Location: UNKNOWN
Test Operator: F.V.
Authorized By: NMOCD
Test Reason: IJJA/PRE PLUG
Scope Of Work: 12-hr
AFE Number: 52100-0000072998
GPS: 33.59999,-103.98769
Notes: MONITORING TUBING FLOW

Orphan Well Flow Test Results

Average Flowrate	Average Flow Temperature	Average Flow Pressure	Flow Duration	Methane Concentration	Methane Emissions	Benzene
0.0051 scf/hr	37.91 °F	-0.0067 psi	1316.49 min	100 %	0.1 g/hr	1 ppm

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

Methane Calculation:

$(\bar{Q}_{measured})$ 0.0051 scf/hr x $(Conc_{measured})$ 1 = 0.0050957 scf CH₄/hr

Methane Flow x (p) x .0423 x .454 x 8,760 = 0.876 CH₄ kg/yr Emission Rate

Where:

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

$Conc_{measured}$ - methane concentration measured

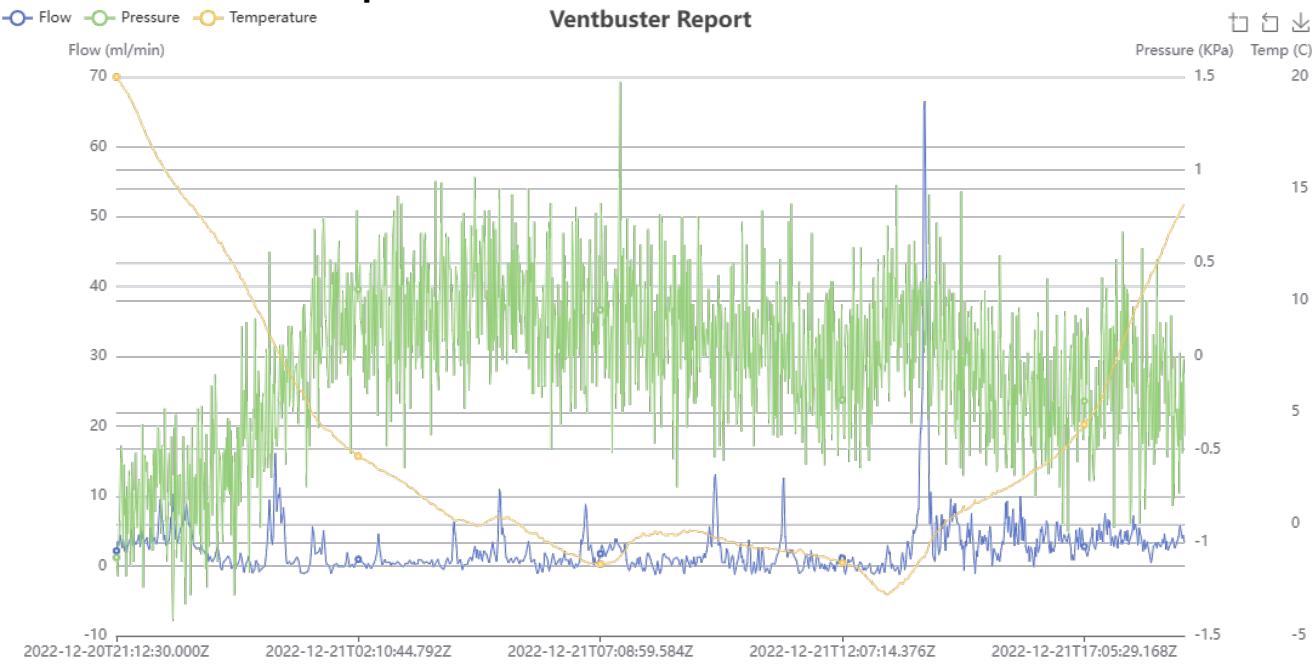
p - 0.0423 methane density at 1 atm; 60° F

0.454 - Conversion from lb to kg

8760 - Conversion from hr to yr

Flow/Pressure/Temperature Timeseries

Ventbuster Report



Site Photos



www.permianls.com
575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

15547G	O'Brien R #001 Tubing Sample	O'Brien R #001
Sample Point Code	Sample Point Name	Sample Point Location
Laboratory Services	2022061764	Tedlar
Source Laboratory	Lab File No	Container Identity
USA	USA	USA
District	Area Name	Field Name
Dec 20, 2022 13:57	Dec 20, 2022 13:57	Dec 22, 2022 14:35
Date Sampled	Date Effective	Date Received
Torrance		
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)	99.7060	99.70524	
CO2 (CO2)	0.0360	0.03635	
Methane (C1)	0.0000	0	
Ethane (C2)	0.0000	0	0.0000
Propane (C3)	0.0000	0	0.0000
I-Butane (IC4)	0.0000	0	0.0000
N-Butane (NC4)	0.0000	0	0.0000
I-Pentane (IC5)	0.0000	0	0.0000
N-Pentane (NC5)	0.0000	0	0.0000
Hexanes Plus (C6+)	0.2580	0.25841	0.1120
TOTAL	100.0000	100.0000	0.1120

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 26, 2022

Gross Heating Values (Real, BTU/ft³)			
14.696 PSI @ 60.00 Å°F		14.73 PSI @ 60.00 Å°F	
Dry	Saturated	Dry	Saturated
13.2	14.00	13.2	14.00

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.9731	0.9732
Molecular Weight	
28.1873	

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

Field H2S
0 PPM

PROTREND STATUS: Passed By Validator on Dec 27, 2022
DATA SOURCE: Imported

PASSED BY VALIDATOR REASON:
Close enough to be considered reasonable.

VALIDATOR:
Luis Cano
VALIDATOR COMMENTS:
OK

Source	Date	Notes
Luis Cano	Dec 27, 2022 8:44 am	Methane: 0 PPM

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 494995

DEFINITIONS

Operator: CANYON E & P COMPANY 251 O'Connor Ridge Blvd. Irving, TX 75038	OGRID: 269864
	Action Number: 494995
	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 494995

QUESTIONS

Operator: CANYON E & P COMPANY 251 O'Connor Ridge Blvd. Irving, TX 75038	OGRID: 269864
	Action Number: 494995
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

QUESTIONS

Prerequisites	
[OGRID] Well Operator	[269864] CANYON E & P COMPANY
[API] Well Name and Number	[30-005-62190] O'BRIEN R #001
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	12/20/2022
Latitude	33.6000557
Longitude	-103.9875488

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

Flow rate in cubic meters per day (m ³ /day)	0.00
Test duration in hours (hr)	21.9
Average flow temperature in degrees Celsius (°C)	3.3
Average gauge flow pressure in kilopascals (kPag)	0.0
Methane concentration in part per million (ppm)	0
Methane emission rate in grams per hour (g/hr)	0.10
Testing Method	Steady State

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

Name of monitoring contractor	WELL DONE NEW MEXICO LLC
-------------------------------	--------------------------