



Pre Plugging Methane Quantification Test Report

Report Prepared By Curtis Shuck

Start Date: Sun Oct 13 2024 00:14:16 GMT+0000
 (Coordinated Universal Time)
End Date: Sun Oct 13 2024 21:22:11 GMT+0000
 (Coordinated Universal Time)
Test Time Subset: 2024-10-13T00:13:33.933Z -
 2024-10-13T21:19:42.035Z
Device: VB100-0005
Well Licensee: NMOCD
Well Name: RW Cowden C 009
UWI: 30-025-27918
Well License Number: 30-025-27918
Surface Location: Deep Wells
Bottom Hole Location: Unknown
Test Operator: CES QMS
Authorized By: NMOCD
Test Reason: IJJA / BIL PRE PLUG METHANE
 QUANTIFICATION
Scope Of Work: 12- hour
AFE Number: 78655
GPS: 32.26362,-103.19609
Notes: Unknown

Orphan Well Flow Test Results

Average Flowrate	Average Flow Temperature	Average Flow Pressure	Flow Duration	Methane Concentration	Methane Emissions	Benzene
290.797 scf/hr	78.15 °F	0 psi	1266.14 min	66.61 %	3719.85 g/hr	1 ppm

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

Methane Calculation:

$(\bar{x}Q_{measured})$ 290.797 scf/hr x $(Conc_{measured})$ 0.6661 = 193.69987527 scf CH₄/hr

Methane Flow x (p) x .0423 x .454 x 8,760 = 32585.886 CH₄ kg/yr Emission Rate

Where:

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

$Conc_{measured}$ - methane concentration measured

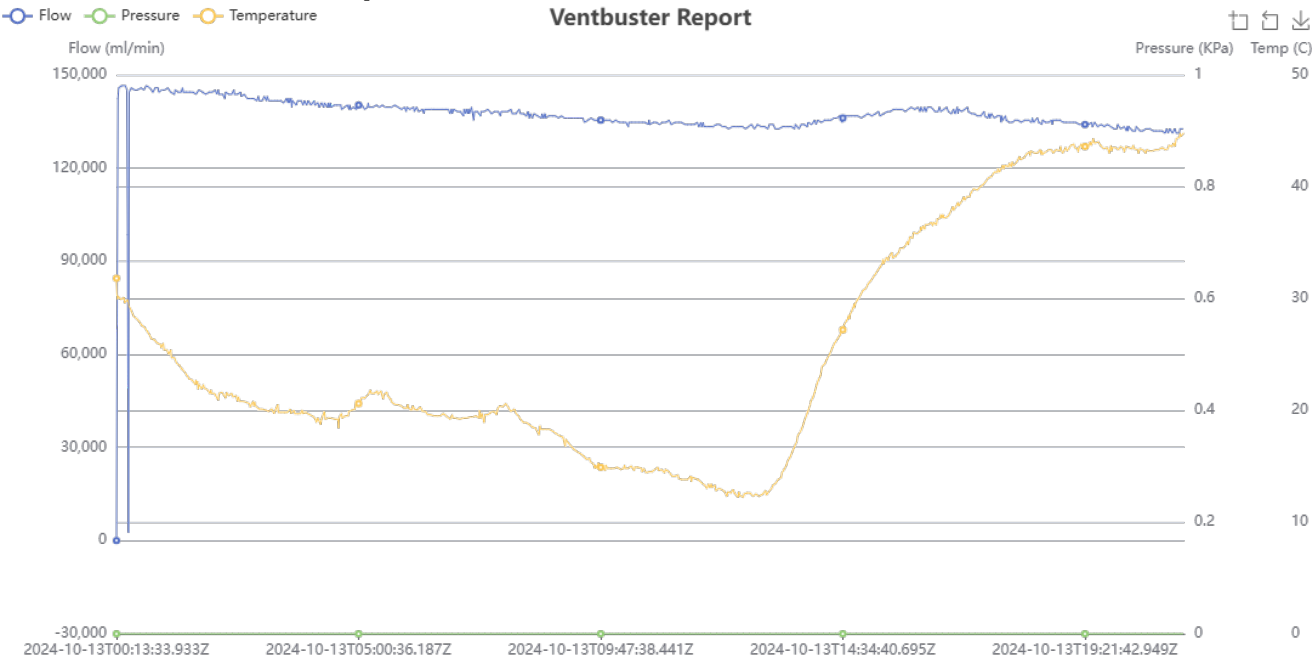
p - 0.0423 methane density at 1 atm; 60° F

0.454 - Conversion from lb to kg

8760 - Conversion from hr to yr

Flow/Pressure/Temperature Timeseries

Ventbuster Report



Site Photos



22530G	Riwi Cowden Pre Plug	Riwi Cowden Pre Plug	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2024099346	Tedlar Bag	CES - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Oct 13, 2024 15:15	Oct 1, 2024	Oct 14, 2024 16:18	Oct 15, 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)	1.9350	1.935	
CO2 (CO2)	0.0950	0.095	
Methane (C1)	66.6100	66.61	
Ethane (C2)	15.8290	15.829	4.2320
Propane (C3)	9.4110	9.411	2.5920
I-Butane (IC4)	1.2560	1.256	0.4110
N-Butane (NC4)	3.0140	3.014	0.9500
I-Pentane (IC5)	0.7370	0.737	0.2690
N-Pentane (NC5)	0.6460	0.646	0.2340
Hexanes Plus (C6+)	0.4670	0.467	0.2030
TOTAL	100.0000	100.0000	8.8910

Gross Heating Values (Real, BTU/ft³)			
14.696 PSI @ 60.00 Å°F		14.73 PSI @ 60.00 Å°F	
Dry	Saturated	Dry	Saturated
1,413.1	1,390.0	1,416.4	1,393.2

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.8356	0.8319
Molecular Weight	
24.0941	

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

Field H2S
0 PPM

PROTREND STATUS: Meets ProTrend Criteria on Oct 16, 2024
DATA SOURCE: Imported

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

VALIDATOR COMMENTS:

Source	Date	Notes
Ashley Russell	Oct 16, 2024 9:25 am	MERTHANE 666,100

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 522195

DEFINITIONS

Operator: Well Done New Mexico LLC (OPG Vendor) 333 Main St Shelby, MT 59474	OGRID: 333567
	Action Number: 522195
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

DEFINITIONS

The OCD Mitigation Activity (OMA) forms are a subset of the OCD's forms exclusively designed for activities related to State of New Mexico's contracted evaluation, plugging, decommissioning, remediation, salvage and reclamation activities. Specifically, these forms are typically used where the OCD has acquired a hearing order allowing the OCD to perform mitigation activities on wells and associated facilities that no longer have an authorized or viable operator to perform the necessary work. These forms are not to be utilized for any other purpose.

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QUESTIONS

Action 522195

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	Action Number: 522195
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

QUESTIONS

Prerequisites	
[OGRID] Well Operator	[142624] ROCA PRODUCTION INC.
[API] Well Name and Number	[30-025-27918] R W COWDEN C #009
Well Status	Reclamation Fund Approved

Monitoring Event Information	
<i>Please answer all the questions in this group.</i>	
Reason For Filing	Pre-Plug Methane Monitoring
Date of monitoring	10/13/2024
Latitude	32.2635422
Longitude	-103.196022

Monitoring Event Details	
<i>Please answer all the questions in this group.</i>	
Flow rate in cubic meters per day (m ³ /day)	6,978.00
Test duration in hours (hr)	76.0
Average flow temperature in degrees Celsius (°C)	25.6
Average gauge flow pressure in kilopascals (kPag)	0.0
Methane concentration in part per million (ppm)	666,100
Methane emission rate in grams per hour (g/hr)	3,719.85
Testing Method	Steady State

Monitoring Contractor	
<i>Please answer all the questions in this group.</i>	
Name of monitoring contractor	WELL DONE NEW MEXICO LLC