



Pre Plugging Methane Quantification Test Report

Report Prepared By Curtis Shuck, QMS

Start Date: Wed Feb 22 2023 00:11:45 GMT+0000
 (Coordinated Universal Time)
End Date: Wed Feb 22 2023 22:00:34 GMT+0000
 (Coordinated Universal Time)
Test Time Subset: 2023-02-22T00:11:45.000Z -
 2023-02-22T21:59:39.426Z
Device: VB100-0040
Well Licensee: 30-005-60580
Well Name: Kuchemanne 002
UWI: 30-005-60580
Well License Number: 30-005-60580
Surface Location: State of NM
Bottom Hole Location: Unknown
Test Operator: Sean O. Jacobson
Authorized By: State of NM
Test Reason: IJJA Pre Plugging
Scope Of Work: 12 Hour
AFE Number: 52100-0000078660
GPS: 33.59194,-104.03090
Notes: GTG

Orphan Well Flow Test Results

Average Flowrate 0.0042 scf/hr	Average Flow Temperature 59.79 °F	Average Flow Pressure 0.1382 psi	Flow Duration 1307.91 min	Methane Concentration 1.93 %	Methane Emissions 0.02 g/hr	Benzene 1 ppm
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Annual Emission Rate = ($\bar{x}Q_{measured}$) x (Conc_{measured}) x p x 0.454 x 8,760

Methane Calculation:

($\bar{x}Q_{measured}$) 0.0042 scf/hr x (Conc_{measured}) 1.93= 0.004 scf CH₄/hr

Methane Flow x (p) x .0423 x .454 x 8,760 = 0.1752 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



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575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

16095G	Kucherman #002	Kucherman #002	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2023064658	Tedlar Bag	S.O. Jacobson - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Feb 21, 2023 16:50	Feb 21, 2023 16:50	Feb 27, 2023 10:48	Mar 1, 2023
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)	88.4740	88.473	
CO2 (CO2)	0.1410	0.141	
Methane (C1)	1.0930	1.093	
Ethane (C2)	0.2340	0.234	0.0630
Propane (C3)	0.1690	0.169	0.0470
I-Butane (IC4)	0.0830	0.083	0.0270
N-Butane (NC4)	0.3160	0.316	0.1000
I-Pentane (IC5)	0.6430	0.643	0.2350
N-Pentane (NC5)	1.1780	1.178	0.4270
Hexanes Plus (C6+)	7.6690	7.669	3.3270
TOTAL	100.0000	99.9990	4.2260

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:	Feb 13, 2023

Gross Heating Values (Real, BTU/ft³)			
14.696 PSI @ 60.00 Å°F		14.73 PSI @ 60.00 Å°F	
Dry	Saturated	Dry	Saturated
500.5	492.8	501.7	493.9

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
1.1711	1.1690
Molecular Weight	
33.8592	

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

Field H2S
0 PPM

PROTREND STATUS: Passed By Validator on Mar 3, 2023
DATA SOURCE: Imported

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

VALIDATOR:
Luis Cano
VALIDATOR COMMENTS:
OK

Source	Date	Notes
Luis Cano	Mar 3, 2023 7:45 am	Methane: 10,930 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 494863

DEFINITIONS

Operator: CANYON E & P COMPANY 251 O'Connor Ridge Blvd. Irving, TX 75038	OGRID: 269864
	Action Number: 494863
	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.

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QUESTIONS

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QUESTIONS

Prerequisites	
[OGRID] Well Operator	[269864] CANYON E & P COMPANY
[API] Well Name and Number	[30-005-60580] KUCHEMANN #002
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	02/22/2023
Latitude	33.5919724
Longitude	-104.0307236

Monitoring Event Details	
<i>Please answer all the questions in this group.</i>	
Flow rate in cubic meters per day (m ³ /day)	0.00
Test duration in hours (hr)	21.8
Average flow temperature in degrees Celsius (°C)	15.4
Average gauge flow pressure in kilopascals (kPag)	0.9
Methane concentration in part per million (ppm)	10,930
Methane emission rate in grams per hour (g/hr)	0.06
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