



Pre-Plugging Methane Emissions Monitoring Report

Jennifer Chaveroo SA Unit 14

Prepared by TS-Nano, Inc.

For NM Energy, Minerals and Natural Resources Department, Oil Conservation Division

PO# 52100-0000078682

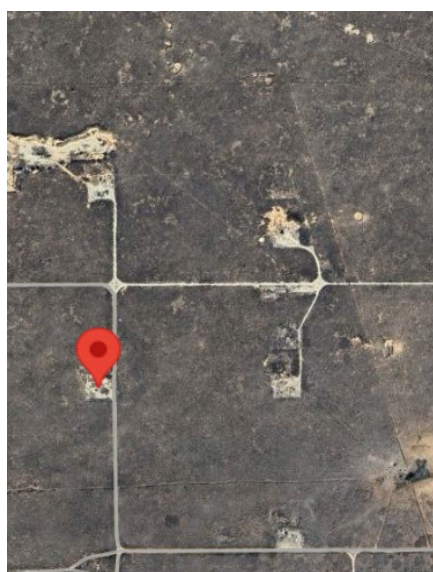
Well information

ID #: 30-041-10575

Coordinates: 33.68811, -103.50746

Name: Jennifer Chaveroo SA Unit 14

Surface Location: Roosevelt County



Measurement notes

Device used: Ventbuster device VB100-0139

Test operator: JR Molina

Gas sample taken from well: 12/4/24 14:00

Ventbuster connected to well: 12/4/24 16:54

Continuous monitoring of well flowrate, pressure, and temperature

Hourly measurement of weather data

Ventbuster disconnected from well: 12/5/24 12:28

Notes: all lines and valves not in line with flowmeter closed and sealed with no apparent leakage.

Gas sample delivered to laboratory: 12/6/24

Laboratory Name/Location: Laboratory Services / Hobbs, NM

**TS-NANO**

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Measurement data

Wellhead pressure (kPa gage)*: less than detection limit (<10 kPa)

Average flow rate (Sm^3/d): 0.606

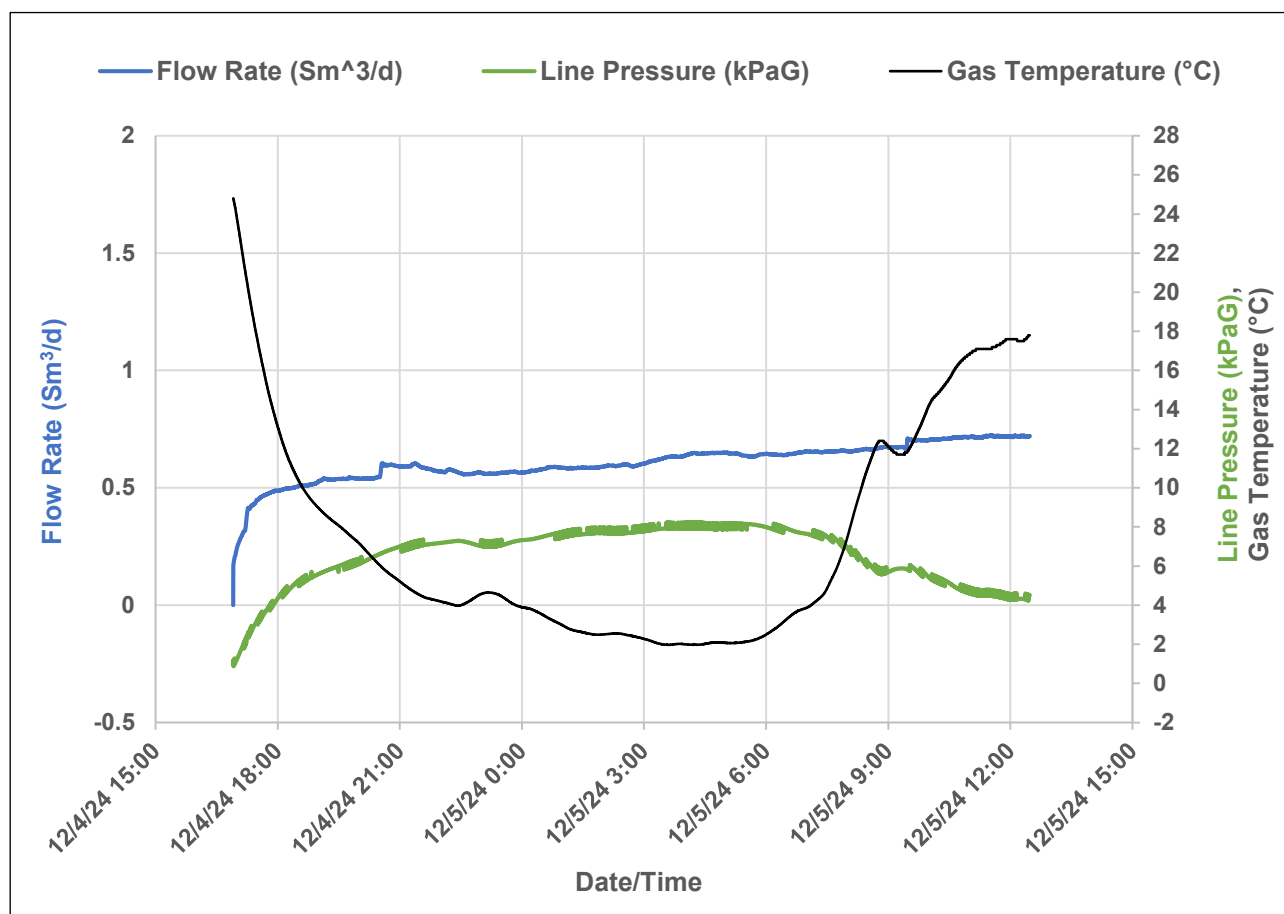
Average methane mass flow rate (g/hr)

using methane % from lab analysis: 4.80

Methane mass flowrate calculation

Variable	Unit	Value
Pressure (P)	kPaA	Std pressure, 101.3 kPaA
Volumetric flow (V)	Std m^3/day	Measured from the Unit
% methane	% (methane/gas)	Measured from lab sample
Temperature (T)	Kelvin	Std temperature, 288.13 K
Gas constant (R)	$\text{m}^3 \text{ Pa}/(\text{K mol})$	8.3144626
Molecular weight of methane (Mw)	g/mole	16.04

$$\text{Mass flow of methane } \left(\frac{\text{g}}{\text{hr}} \right) = \frac{\%, \text{ methane}}{100\%} * V * P * \frac{Mw}{R T} * \frac{1000}{24}$$



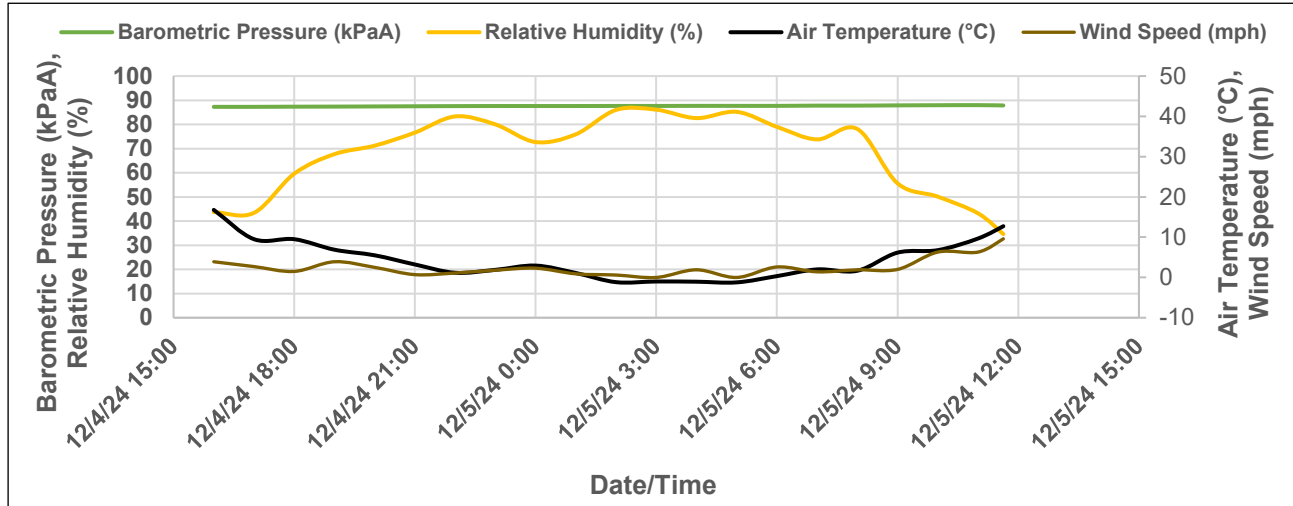


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Weather data

Precipitation during measurement period (in): 0.000



Date and Time	Air Temperature (°C)	Relative Humidity (%)	Barometric Pressure (kPaA)	Wind Speed (mph)
12/4/2024 16:00	16.8	43.7	87.27	3.9
12/4/2024 17:00	9.5	43.4	87.27	2.7
12/4/2024 18:00	9.5	59.6	87.33	1.5
12/4/2024 19:00	6.9	67.7	87.37	3.9
12/4/2024 20:00	5.5	71.2	87.44	2.5
12/4/2024 21:00	3.2	76.6	87.50	0.7
12/4/2024 22:00	1.2	83.3	87.57	1.1
12/4/2024 23:00	1.9	80.0	87.61	1.8
12/5/2024 0:00	2.9	72.7	87.61	2.3
12/5/2024 1:00	1.1	75.9	87.61	0.9
12/5/2024 2:00	-1.2	86.0	87.64	0.6
12/5/2024 3:00	-1.0	86.1	87.64	0.0
12/5/2024 4:00	-1.1	82.6	87.67	1.9
12/5/2024 5:00	-1.2	85.2	87.67	0.0
12/5/2024 6:00	0.3	79.0	87.67	2.6
12/5/2024 7:00	2.0	73.8	87.78	1.4
12/5/2024 8:00	1.7	78.1	87.78	1.9
12/5/2024 9:00	6.2	55.6	87.88	2.0
12/5/2024 10:00	6.8	50.1	87.94	6.3
12/5/2024 11:00	9.7	43.2	87.98	6.3
12/5/2024 11:37	12.7	34.6	87.84	9.6



23028G		Jennifer Chaveroo SA Unit #14		Jennifer Chaveroo SA Unit #14	
Sample Point Code		Sample Point Name		Sample Point Location	
Laboratory Services		2024102518		BAG	
Source Laboratory		Lab File No		Container Identity	
USA		USA		New Mexico	
District		Area Name		Facility Name	
Dec 2, 2024		Dec 1, 2024		Dec 6, 2024 11:29	
Date Sampled		Date Effective		Date Received	
Dec 9, 2024					
Date Reported					
Luis					
Ambient Temp (°F)		Flow Rate (Mcf)		Analyst	
				Press PSI @ Temp °F	
				Source Conditions	
TS-Nano				NG	
Operator				Lab Source Description	

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	63.0330	63.0312	
CO2 (CO2)	0.0390	0.0388	
Methane (C1)	28.0680	28.0685	
Ethane (C2)	4.7320	4.73227	1.2650
Propane (C3)	2.4670	2.46745	0.6790
I-Butane (IC4)	0.3050	0.30519	0.1000
N-Butane (NC4)	0.7330	0.73295	0.2310
I-Pentane (IC5)	0.1170	0.11746	0.0430
N-Pentane (NC5)	0.1950	0.19487	0.0710
Hexanes Plus (C6+)	0.3110	0.31129	0.1350
TOTAL	100.0000	100.0000	2.5240

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
493.3	485.8	494.4	486.9

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.8918	0.8911
Molecular Weight	
25.8066	

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

PROTREND STATUS: Passed By Validator on Dec 10, 2024
DATA SOURCE: Imported
PASSED BY VALIDATOR REASON: First sample taken @ this point, composition looks reasonable
VALIDATOR: Ashley Russell
VALIDATOR COMMENTS: OK



575.397.3713 2609 W Marland Hobbs, NM 88240

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

[illegible]

Relinquished by JR Molina 	Date: Dec 6, 2024	Received by:	Phone Result: ☐ Yes ☐ No Add'l Phone:
	Time: 10:00 am		Email Result: ☐ Yes ☐ No
Relinquished by	Date:	Received by:	REMARKS:
	Time:		
Deliver by: (circle one)			
Sampler - UPS - Bus - other:	Sample Condition	Checked by (Initials)	
	Cool Intact		
	Yes ☐ Yes ☐		
	No ☐ No ☐		

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 418683

DEFINITIONS

Operator: RIDGEWAY ARIZONA OIL CORP. 575 N. Dairy Ashford Houston, TX 77079	OGRID: 164557
	Action Number: 418683
	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	[164557] RIDGEWAY ARIZONA OIL CORP.
[API] Well Name and Number	[30-041-10575] JENNIFER CHAVEROO SA UNIT #014
Well Status	Active

Monitoring Event Information	
Please answer all the questions in this group.	
Reason For Filing	Pre-Plug Methane Monitoring
Date of monitoring	12/04/2024
Latitude	33.68811
Longitude	-103.50750

Monitoring Event Details	
Please answer all the questions in this group.	
Flow rate in cubic meters per day (m³/day)	0.61
Test duration in hours (hr)	19.6
Average flow temperature in degrees Celsius (°C)	7.4
Average gauge flow pressure in kilopascals (kPag)	6.6
Methane concentration in part per million (ppm)	280,680
Methane emission rate in grams per hour (g/hr)	4.80
Testing Method	Steady State

Monitoring Contractor	
Please answer all the questions in this group.	
Name of monitoring contractor	TS-Nano, Inc.