



## Pre-Plugging Methane Emissions Monitoring Report

*Haley Chaveroo SA Unit 14*

Prepared by TS-Nano, Inc.

For NM Energy, Minerals and Natural Resources Department, Oil Conservation Division  
PO# 52100-0000079762

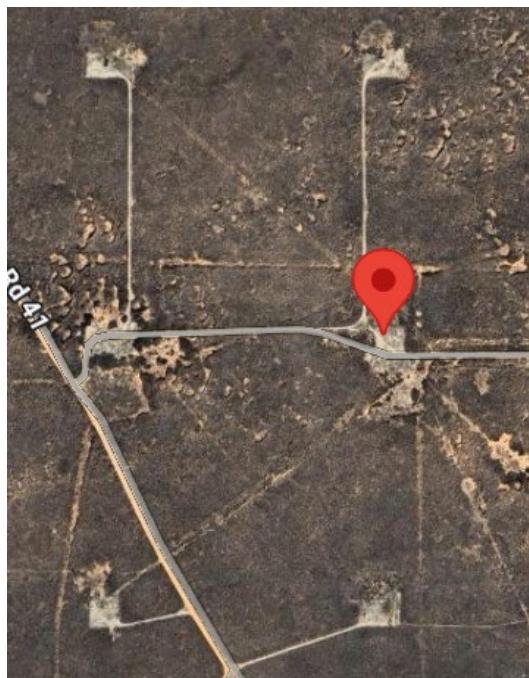
### Well information

ID #: 30-041-10137

Coordinates: 33.66585, -103.57294

Name: Haley Chaveroo SA Unit 14

Surface Location: Roosevelt County



### Measurement notes

Device used: Ventbuster device VB100-0139

Test operator: Jay Kitowski

Gas sample taken from well: 4/17/25 11:30

Ventbuster connected to well: 4/17/25 12:12

Continuous monitoring of well flowrate, pressure,  
and temperature

Hourly measurement of weather data

Ventbuster disconnected from well: 4/18/25 14:10

Notes: wellhead pressure of 1633 kPa (237 psi), bled off.

Gas sample delivered to laboratory: 4/22/25

Laboratory Name/Location: Laboratory Services / Hobbs, NM



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### Measurement data

Wellhead pressure (kPa gage)\*: 1633 kPa

Average flow rate ( $\text{Sm}^3/\text{d}$ ): 186.166

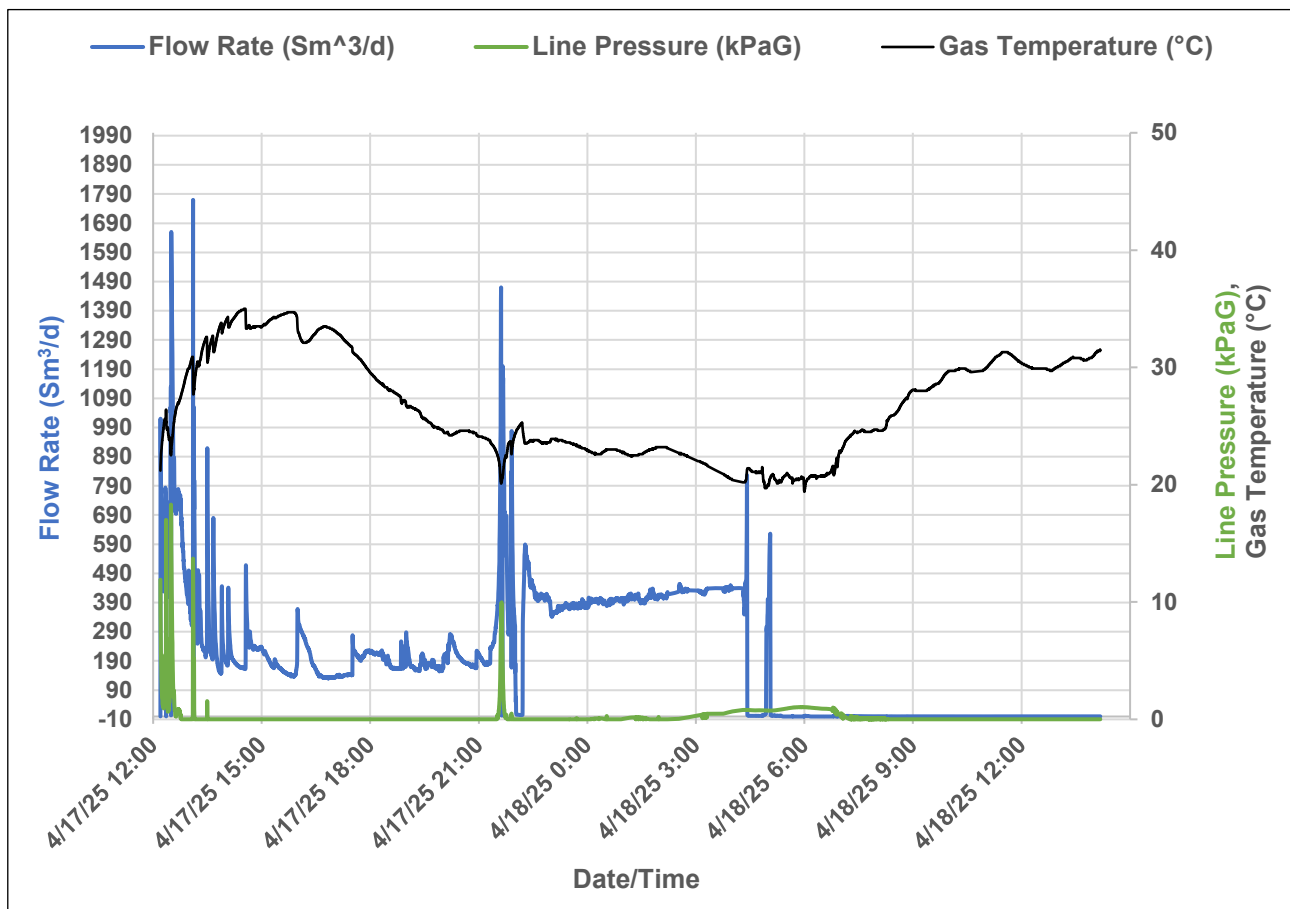
Average methane mass flow rate (g/hr)

using methane % from lab analysis: 1543.67

### Methane mass flowrate calculation

Variable	Unit	Value
Pressure (P)	kPaA	Std pressure, 101.3 KPaA
Volumetric flow (V)	Std $\text{m}^3/\text{day}$	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

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



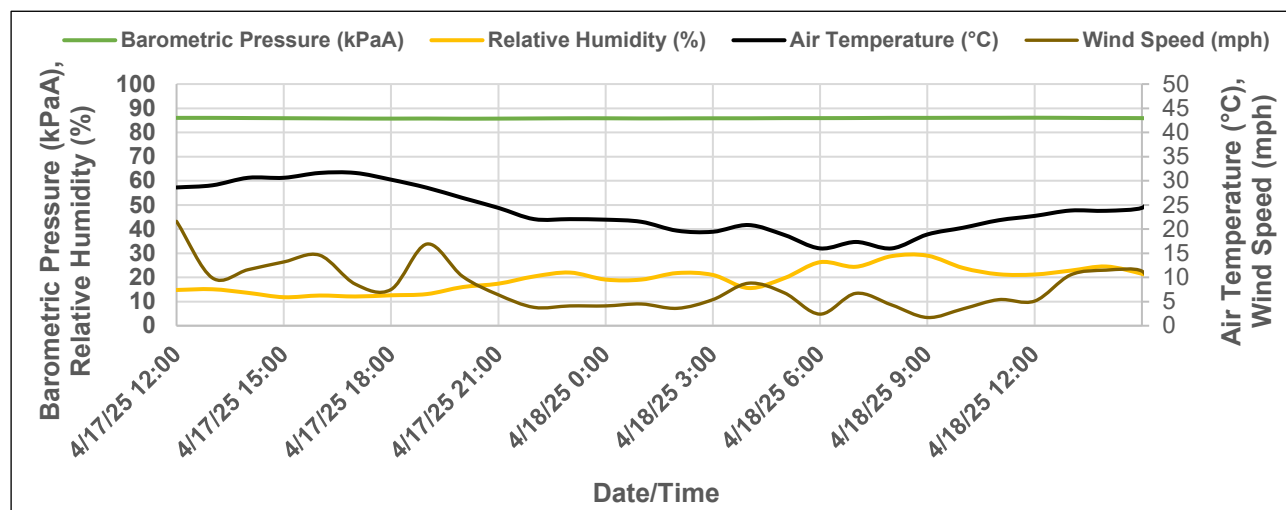
**TS-NANO**

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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)
4/17/2025 12:00	28.6	14.8	86.01	21.6
4/17/2025 13:00	29.1	15.1	86.01	9.9
4/17/2025 14:00	30.6	13.6	85.95	11.6
4/17/2025 15:00	30.6	11.8	85.88	13.2
4/17/2025 16:00	31.6	12.5	85.81	14.6
4/17/2025 17:00	31.6	12.1	85.74	8.6
4/17/2025 18:00	30.2	12.6	85.71	7.5
4/17/2025 19:00	28.6	13.1	85.74	16.9
4/17/2025 20:00	26.4	16.0	85.68	10.2
4/17/2025 21:00	24.4	17.4	85.71	6.4
4/17/2025 22:00	22.1	20.4	85.78	3.8
4/17/2025 23:00	22.1	22.0	85.84	4.1
4/18/2025 0:00	21.9	19.1	85.84	4.1
4/18/2025 1:00	21.5	19.1	85.78	4.5
4/18/2025 2:00	19.7	21.8	85.81	3.6
4/18/2025 3:00	19.4	21.0	85.84	5.4
4/18/2025 4:00	20.8	15.6	85.84	8.8
4/18/2025 5:00	18.8	19.7	85.91	6.8
4/18/2025 6:00	16.0	26.3	85.91	2.4
4/18/2025 7:00	17.3	24.4	85.95	6.7
4/18/2025 8:00	16.0	28.8	86.01	4.3
4/18/2025 9:00	18.9	29.0	86.01	1.7
4/18/2025 10:00	20.3	23.9	86.05	3.5



24242G	30-041-10137	HALEY CHAVEROO #14	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2025110372	BAG	JAY KITOWSKI - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Apr 17, 2025	Apr 1, 2025	Apr 22, 2025 10:09	Apr 28, 2025
Date Sampled	Date Effective	Date Received	Date Reported
Admin			
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)	68.3570	68.3585	
CO2 (CO2)	0.2180	0.21829	
Methane (C1)	29.3430	29.343	
Ethane (C2)	1.5160	1.51563	0.4050
Propane (C3)	0.2640	0.26371	0.0730
I-Butane (IC4)	0.0000	0	0.0000
N-Butane (NC4)	0.0580	0.05755	0.0180
I-Pentane (IC5)	0.0290	0.02854	0.0110
N-Pentane (NC5)	0.0270	0.02722	0.0100
Hexanes Plus (C6+)	0.1880	0.18755	0.0820
TOTAL	100.0000	100.0000	0.5990

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:	Mar 14, 2025

Gross Heating Values (Real, BTU/ft³)			
14.696 PSI @ 60.00 Å°F		14.73 PSI @ 60.00 Å°F	
Dry	Saturated	Dry	Saturated
344.8	339.8	345.6	340.6

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.8555	0.8552
Molecular Weight	
24.7740	

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

Field H2S
0 PPM

**PROTREND STATUS:**

Passed By Validator on Apr 29, 2025

**DATA SOURCE:**

Imported

**PASSED BY VALIDATOR REASON:**

First sample taken @ this point, composition looks reasonable

**VALIDATOR:**

Ashley Russell

**VALIDATOR COMMENTS:**

OK

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

www.permianls.com

575.397.3713 2609 W Marland Hobbs, NM 88240

Company Name: TS- Nano, Inc.										<b>BILL TO</b>			Analysis Request																	
Project Manager: John Stormont										PO #:																				
Address: 5901 Indian School Rd. NE										Company: TS- Nano, Inc.																				
City: Albuquerque				State: NM			Zip: 87110			Attn: Jay Kitowski																				
Phone #: 505-907-4095				Email: jstormont@ts-nano.com						Address: Same																				
Project #:				Project Owner:						City:																				
Project Name:				State:						Zip:																				
Project Location: RIDGEWAY ARIZONA OIL CORPORATION										Phone #: 505-464-4836																				
Sampler Name:										Email: jkitowski@ts-nano.com																				
Lab I.D.	Sample I.D.	(S)POT or (C)OMP	# Container	Matrix						Preserve			Sampling		C-6+ RGA	C-10+ Ext														
				Groundwater	Wastewater	GAS	Oil	Solid	Other	Acid/Base	Ice/Cool	Other	Date	Time																
30-041-10174	HALEY CHAVEROO 001	S	1 TEDLAR			X							4.21.2025	7:00 AM	X															
30-041-10172	HALEY CHAVEROO 002	S	1 TEDLAR			X							4.21.2025	7:00 AM	X															
30-041-10137	HALEY CHAVEROO #14	S	1 TEDLAR			X							4.21.2025	7:00 AM	X															
30-041-10170	HALEY CHAVEROO #15	S	1 TEDLAR			X							4.21.2025	7:00 AM	X															

Relinquished by Jay Kitowski		Date: 04/21/25		Received by:		Phone Result: <input type="checkbox"/> Yes <input type="checkbox"/> No Add'l Phone:	
<i>Jay Kitowski</i>		Time: 7 am				Email Result: <input type="checkbox"/> Yes <input type="checkbox"/> No	
Relinquished by		Date:		Received by:		REMARKS:	
		Time:					
Deliver by: (circle one)							
Sampler - UPS - Bus - other:				Sample Condition Cool                      Intact Yes <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No <input type="checkbox"/>		Checked by (Initials)	

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 466100

DEFINITIONS

Operator:  RIDGEWAY ARIZONA OIL CORP. 575 N. Dairy Ashford Houston, TX 77079	OGRID:  164557
	Action Number:  466100
	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

Action 466100

QUESTIONS

Operator:  RIDGEWAY ARIZONA OIL CORP. 575 N. Dairy Ashford Houston, TX 77079	OGRID:  164557
	Action Number:  466100
	Action Type:  [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

QUESTIONS

<b>Prerequisites</b>	
[OGRID] Well Operator	[164557] RIDGEWAY ARIZONA OIL CORP.
[API] Well Name and Number	[30-041-10137] HALEY CHAVEROO SA UNIT #014
Well Status	Active

<b>Monitoring Event Information</b>	
<i>Please answer all the questions in this group.</i>	
Reason For Filing	Pre-Plug Methane Monitoring
Date of monitoring	04/17/2025
Latitude	33.66585
Longitude	-103.57294

<b>Monitoring Event Details</b>	
<i>Please answer all the questions in this group.</i>	
Flow rate in cubic meters per day (m³/day)	186.17
Test duration in hours (hr)	26.0
Average flow temperature in degrees Celsius (°C)	26.9
Average gauge flow pressure in kilopascals (kPag)	0.2
Methane concentration in part per million (ppm)	293,430
Methane emission rate in grams per hour (g/hr)	1,543.67
Testing Method	Steady State

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