

Pre-Plugging Methane Emissions Monitoring Report

Morgan A Federal 005

Prepared by TS-Nano, Inc.
For NM Energy, Minerals and Natural Resources Department, Oil Conservation Division PO# 52100-0000078682

Well information

 ID #:
 30-041-10416
 Coordinates:
 33.67686, -103.55114

 Name:
 Morgan A Federal 005
 Surface Location:
 Roosevelt County





Measurement notes

Device used: Ventbuster device VB100-0139

Test operator: JR Molina

Gas sample taken from well: 12/23/24 12:00 Ventbuster connected to well: 12/23/24 12:23

Continuous monitoring of well flowrate, pressure,

and temperature

Hourly measurement of weather data

Ventbuster disconnected from well: 12/24/24 11:48

Notes: No remarkable observations

Gas sample delivered to laboratory: 1/2/25

Laboratory Name/Location: Laboratory Services / Hobbs, NM



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Measurement data

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

Average flow rate (Sm³/d): 0.003

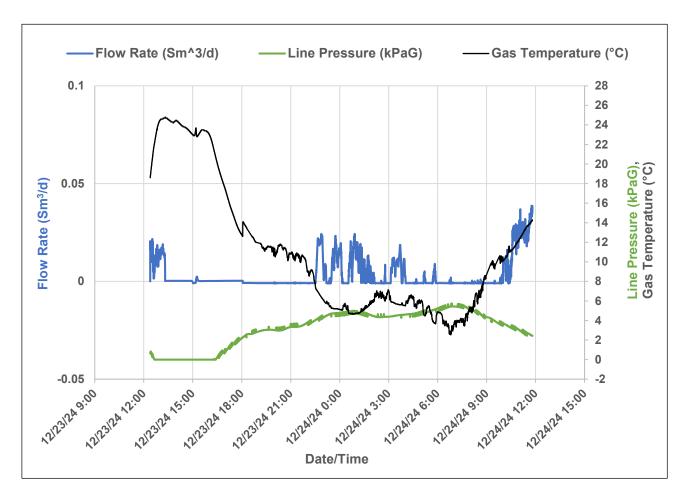
Average methane mass flow rate (g/hr)

using methane % from lab analysis: 0.00

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)	m^3 Pa/(K mol)	8.3144626					
Molecular weight of methane (Mw)	g/mole	16.04					

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



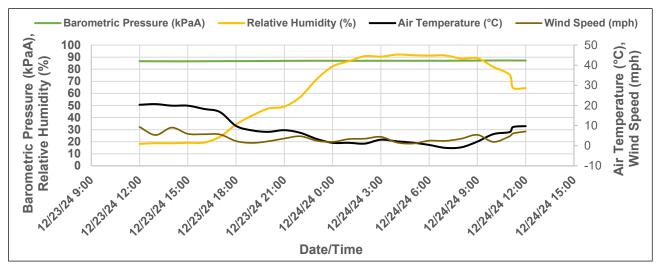


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Weather data

Precipitation during measurement period (in): 0.000



Air	Relative	Barometric	Wind
Temperature	Humidity	Pressure	Speed
(°C)	(%)	(kPaA)	(mph)
20.3	18.2	86.59	9.3
20.7	18.8	86.56	5.3
19.9	18.7	86.52	9.0
19.9	19.1	86.52	5.9
18.3	19.3	86.59	5.7
16.7	24.1	86.66	5.6
9.8	34.3	86.69	2.3
7.6	41.7	86.73	1.4
6.9	47.4	86.83	2.2
7.7	49.1	86.89	3.6
6.4	57.1	86.96	4.7
3.4	71.6	87.00	2.5
1.4	82.3	86.96	1.9
1.4	86.6	86.93	3.3
1.1	90.8	86.96	3.5
3.0	90.4	86.96	4.4
2.2	92.1	87.00	1.6
1.5	91.6	86.96	1.1
0.4	91.3	87.00	2.5
-1.1	91.4	87.00	2.4
-0.8	88.8	87.06	3.5
2.1	89.1	87.13	5.4
5.8	81.8	87.20	1.9
	Temperature (°C) 20.3 20.7 19.9 19.9 18.3 16.7 9.8 7.6 6.9 7.7 6.4 3.4 1.4 1.1 3.0 2.2 1.5 0.4 -1.1 -0.8 2.1	Temperature (°C) (%) 20.3 18.2 20.7 18.8 19.9 18.7 19.9 19.1 18.3 19.3 16.7 24.1 9.8 34.3 7.6 41.7 6.9 47.4 7.7 49.1 6.4 57.1 3.4 71.6 1.4 82.3 1.4 86.6 1.1 90.8 3.0 90.4 2.2 92.1 1.5 91.6 0.4 91.3 -1.1 91.4 -0.8 88.8 2.1 89.1	Temperature (°C) Humidity (%) Pressure (kPaA) 20.3 18.2 86.59 20.7 18.8 86.56 19.9 18.7 86.52 19.9 19.1 86.52 18.3 19.3 86.59 16.7 24.1 86.66 9.8 34.3 86.69 7.6 41.7 86.73 6.9 47.4 86.83 7.7 49.1 86.89 6.4 57.1 86.96 3.4 71.6 87.00 1.4 82.3 86.96 3.0 90.4 86.96 3.0 90.4 86.96 3.0 90.4 86.96 0.4 91.3 87.00 -1.1 91.4 87.00 -1.1 91.4 87.00 -0.8 88.8 87.06 2.1 89.1 87.13

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



23245G	Morgan A Federal #005	
Sample Point Code	Sample Point Name	Sample Point Location

Laborator	y Services	2025104053	BAG		JR Molina - Spot					
Source L	aboratory	Lab File No	Container Ider	Sampler						
USA		USA	USA		New Mexico					
District		Area Name		Facility Name						
Dec 23,	2024	Dec 1, 2024		Jan 2, 2025 11:34	Jan 11, 2025					
Date San	npled	Date Effective		Date Received	Date Reported					
		Admin								
Ambient Temp (°F)	Flow Rate (Mcf)	Analyst	Press PSI (Source C	@ Temp °F Conditions						
TS-N	ano				NG					
Opera	ator	_			Lab Source Description					

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	99.8610	99.8612	
CO2 (CO2)	0.0350	0.03457	
Methane (C1)	0.0470	0.04749	
Ethane (C2)	0.0120	0.01217	0.0030
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)	0.0450	0.0446	0.0160
N-Pentane (NC5)	0.0000	0	0.0000
Hexanes Plus (C6+)	0.0000	0	0.0000
TOTAL	100.0000	100.0000	0.0190

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 PS	I @ 60.00 °F	14.73 PSI @ 60.00 °F						
Dry	Saturated	Dry	Saturated					
2.5	3.3	2.5	3.3					
Calculated Total Sample Properties								

Calculated Total Sample Properties							
GPA2145-16 *Calculated at Contract Conditions							
Relative Density Real	Relative Density Ideal						
0.9678	0.9679						
Molecular Weight							
28.0335							

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

PROTREND STATUS: DATA SOURCE: Passed By Validator on Jan 13, 2025 Imported

PASSED BY VALIDATOR REASON:

First sample taken @ this point, composition looks reasonable

VALIDATOR:

Ashley Russell

VALIDATOR COMMENTS:

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City: Albuquerque	•	Sta	ate: NM			Zip:	8711	10		Attr	n: Jay	, Kito	owski										!		i 1		
Phone #: 505-90	7-4095	Em	ail: jstormo	ont@	ts-na	no.	com			Add	dress	: Sar	me												i 1		
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Sampler - UF	PS - Bus -	other	:		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 421986

DEFINITIONS

Operator:	OGRID:
RIDGEWAY ARIZONA OIL CORP.	164557
575 N. Dairy Ashford	Action Number:
Houston, TX 77079	421986
	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 421986

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Operator:	OGRID:
RIDGEWAY ARIZONA OIL CORP.	164557
575 N. Dairy Ashford	Action Number:
Houston, TX 77079	421986
	Action Type:
	[UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

QUESTIONS

Prerequisites		
[OGRID] Well Operator	[164557] RIDGEWAY ARIZONA OIL CORP.	
[API] Well Name and Number	[30-041-10416] MORGAN A FEDERAL #005	
Well Status	Active	

Monitoring Event Information	
Please answer all the questions in this group.	
Reason For Filing	Pre-Plug Methane Monitoring
Date of monitoring	12/23/2024
Latitude	33.67686
Longitude	-103.55100

Monitoring Event Details		
Please answer all the questions in this group.		
Flow rate in cubic meters per day (m³/day)	0.00	
Test duration in hours (hr)	23.4	
Average flow temperature in degrees Celsius (°C)	11.2	
Average gauge flow pressure in kilopascals (kPag)	3.2	
Methane concentration in part per million (ppm)	470	
Methane emission rate in grams per hour (g/hr)	0.00	
Testing Method	Steady State	

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