



Pre-Plugging Methane Emissions Monitoring Report

Haley Chaveroo 002

Prepared by TS-Nano, Inc.

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

PO# 52100-0000079762

Well information

ID #: 30-041-10172

Name: Haley Chaveroo 002

Coordinates: 33.66951, -103.57295

Surface Location: Roosevelt County



Measurement notes

Device used: Ventbuster device VB100-0138

Test operator: Jay Kitowski

Gas sample taken from well: 4/16/25 12:05

Ventbuster connected to well: 4/16/25 12:13

Continuous monitoring of well flowrate, pressure, and temperature

Hourly measurement of weather data

Ventbuster disconnected from well: 4/17/25 10:29

Notes: Some initial wellhead pressure (274 kPa), bled off.

Gas sample delivered to laboratory: 4/22/25

Laboratory Name/Location: Laboratory Services / Hobbs, NM



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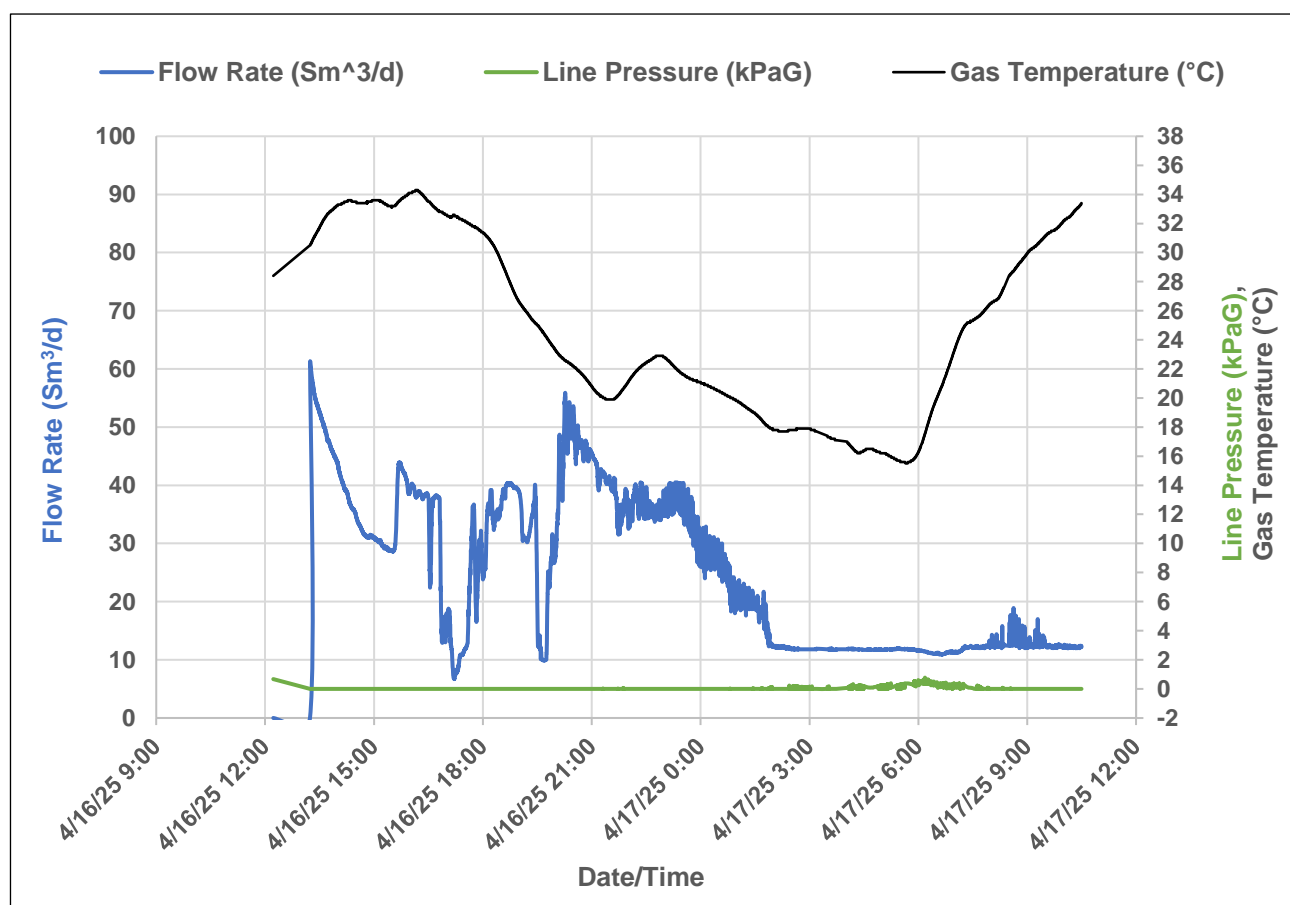
Measurement data

Wellhead pressure (kPa gage)*: 274 kPa
 Average flow rate (Sm^3/d): 25.116
Average methane mass flow rate (g/hr)
 using methane % from lab analysis: 2.97

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 |

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



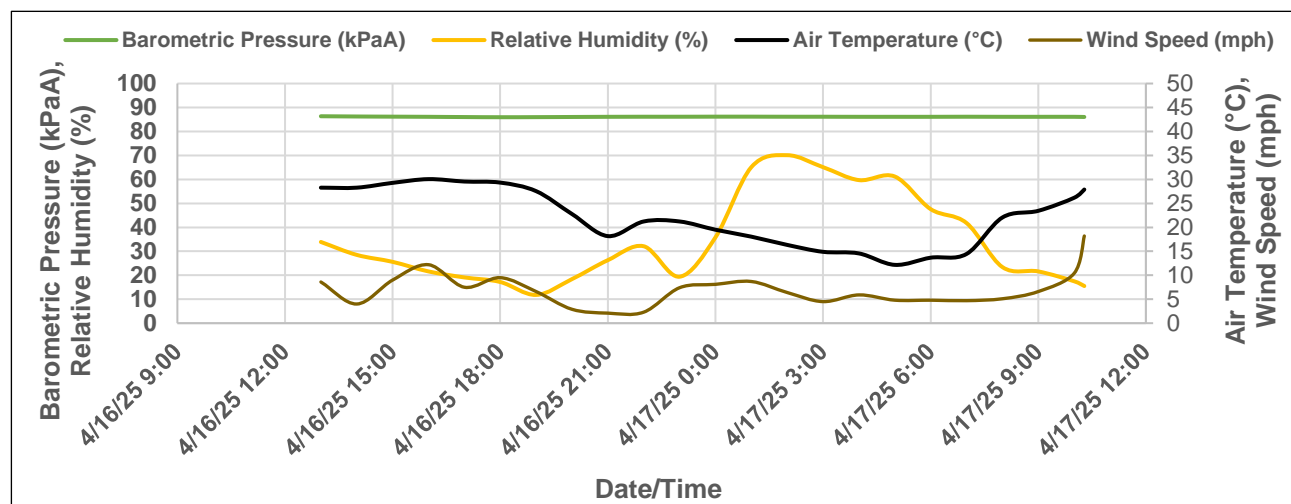


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Weather data

Precipitation during measurement period (in): 0.000



| Date and Time | Air Temperature (°C) | Relative Humidity (%) | Barometric Pressure (kPaA) | Wind Speed (mph) |
|-----------------|----------------------|-----------------------|----------------------------|------------------|
| 4/16/2025 13:00 | 28.3 | 33.9 | 86.35 | 8.6 |
| 4/16/2025 14:00 | 28.3 | 28.5 | 86.25 | 4.0 |
| 4/16/2025 15:00 | 29.3 | 25.6 | 86.18 | 9.0 |
| 4/16/2025 16:00 | 30.1 | 21.6 | 86.12 | 12.2 |
| 4/16/2025 17:00 | 29.6 | 19.1 | 86.01 | 7.5 |
| 4/16/2025 18:00 | 29.3 | 17.2 | 85.95 | 9.5 |
| 4/16/2025 19:00 | 27.6 | 11.8 | 85.98 | 6.6 |
| 4/16/2025 20:00 | 22.8 | 18.4 | 86.05 | 2.9 |
| 4/16/2025 21:00 | 18.2 | 26.3 | 86.12 | 2.1 |
| 4/16/2025 22:00 | 21.2 | 32.1 | 86.15 | 2.3 |
| 4/16/2025 23:00 | 21.2 | 19.4 | 86.15 | 7.4 |
| 4/17/2025 0:00 | 19.5 | 35.8 | 86.18 | 8.1 |
| 4/17/2025 1:00 | 18.1 | 65.1 | 86.18 | 8.7 |
| 4/17/2025 2:00 | 16.3 | 70.1 | 86.15 | 6.4 |
| 4/17/2025 3:00 | 14.9 | 65.1 | 86.15 | 4.5 |
| 4/17/2025 4:00 | 14.6 | 59.7 | 86.12 | 5.9 |
| 4/17/2025 5:00 | 12.2 | 61.2 | 86.12 | 4.8 |
| 4/17/2025 6:00 | 13.7 | 47.6 | 86.12 | 4.8 |



| | | | |
|---------------------|-------------------|------------------------|--|
| 24240G | 30-041-10172 | HALEY CHAVEROO 002 | |
| Sample Point Code | Sample Point Name | Sample Point Location | |
| Laboratory Services | 2025110364 | 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 16, 2025 | Apr 1, 2025 | Apr 22, 2025 10:00 | 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) | 99.3800 | 99.3805 | |
| CO2 (CO2) | 0.0000 | 0 | |
| Methane (C1) | 0.4190 | 0.41873 | |
| Ethane (C2) | 0.0600 | 0.05977 | 0.0160 |
| 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) | 0.0000 | 0 | 0.0000 |
| N-Pentane (NC5) | 0.0000 | 0 | 0.0000 |
| Hexanes Plus (C6+) | 0.1410 | 0.14096 | 0.0610 |
| TOTAL | 100.0000 | 100.0000 | 0.0770 |

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 |
| 12.5 | 13.3 | 12.5 | 13.3 |

| Calculated Total Sample Properties | |
|---|------------------------|
| GPA2145-16 *Calculated at Contract Conditions | |
| Relative Density Real | Relative Density Ideal |
| 0.9685 | 0.9686 |
| Molecular Weight | |
| 28.0564 | |

| 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. | | | | | | | | | | BILL TO | | | 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 | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | |
|------------------------------|--|----------------|--|--|--|---|--|
| 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 466089

DEFINITIONS

| | |
|--|---|
| Operator: RIDGEWAY ARIZONA OIL CORP. 575 N. Dairy Ashford Houston, TX 77079 | OGRID: 164557 |
| | Action Number: 466089 |
| | 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 466089

QUESTIONS

| | |
|--|---|
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QUESTIONS

| | |
|----------------------------|--|
| Prerequisites | |
| [OGRID] Well Operator | [164557] RIDGEWAY ARIZONA OIL CORP. |
| [API] Well Name and Number | [30-041-10172] HALEY CHAVEROO SA UNIT #002 |
| Well Status | Active |

Monitoring Event Information*Please answer all the questions in this group.*

| | |
|--------------------|-----------------------------|
| Reason For Filing | Pre-Plug Methane Monitoring |
| Date of monitoring | 04/16/2025 |
| Latitude | 33.66951 |
| Longitude | -103.57295 |

Monitoring Event Details*Please answer all the questions in this group.*

| | |
|---|--------------|
| Flow rate in cubic meters per day (m ³ /day) | 25.12 |
| Test duration in hours (hr) | 22.3 |
| Average flow temperature in degrees Celsius (°C) | 25.1 |
| Average gauge flow pressure in kilopascals (kPag) | 0.0 |
| Methane concentration in part per million (ppm) | 4,187 |
| Methane emission rate in grams per hour (g/hr) | 2.97 |
| Testing Method | Steady State |

Monitoring Contractor*Please answer all the questions in this group.*

| | |
|-------------------------------|---------------|
| Name of monitoring contractor | TS-Nano, Inc. |
|-------------------------------|---------------|