



Pre Plugging Methane Quantification Test Report

Report Prepared By Curtis Shuck, QMS

Start Date: Tue Mar 07 2023 20:10:09 GMT+0000
 (Coordinated Universal Time)
End Date: Wed Mar 08 2023 18:52:44 GMT+0000
 (Coordinated Universal Time)
Test Time Subset: 2023-03-07T20:10:09.000Z -
 2023-03-08T18:51:46.786Z
Device: VB100-0054
Well Licensee: 30-005-60906
Well Name: Kuchemanne 005
UWI: 30-005-60906
Well License Number: 30-005-60906
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: 33.59189,-104.02345
Notes: GTG

Orphan Well Flow Test Results

| Average Flowrate | Average Flow Temperature | Average Flow Pressure | Flow Duration | Methane Concentration | Methane Emissions | Benzene |
|-------------------|--------------------------|-----------------------|----------------|-----------------------|-------------------|------------|
| -0.0331 scf/hr | 58.18 °F | 0.5297 psi | 1361.63 min | 0.42 % | 0.00 g/hr | N/A ppm |

Annual Emission Rate = $(\bar{x}Q_{measured}) \times (Conc_{measured}) \times p \times 0.454 \times 8,760$

Methane Calculation:

$(\bar{x}Q_{measured}) - 0.0331 \text{ scf/hr} \times (Conc_{measured}) 0.4 = 0.0 \text{ scf CH}_4/\text{hr}$

Methane Flow $\times (p) \times .0423 \times .454 \times 8,760 = \text{null CH}_4 \text{ kg/yr Emission Rate}$

Where:

$Q_{measured}$ - scf/hr total measured flow

$Conc_{measured}$ - methane concentration measured

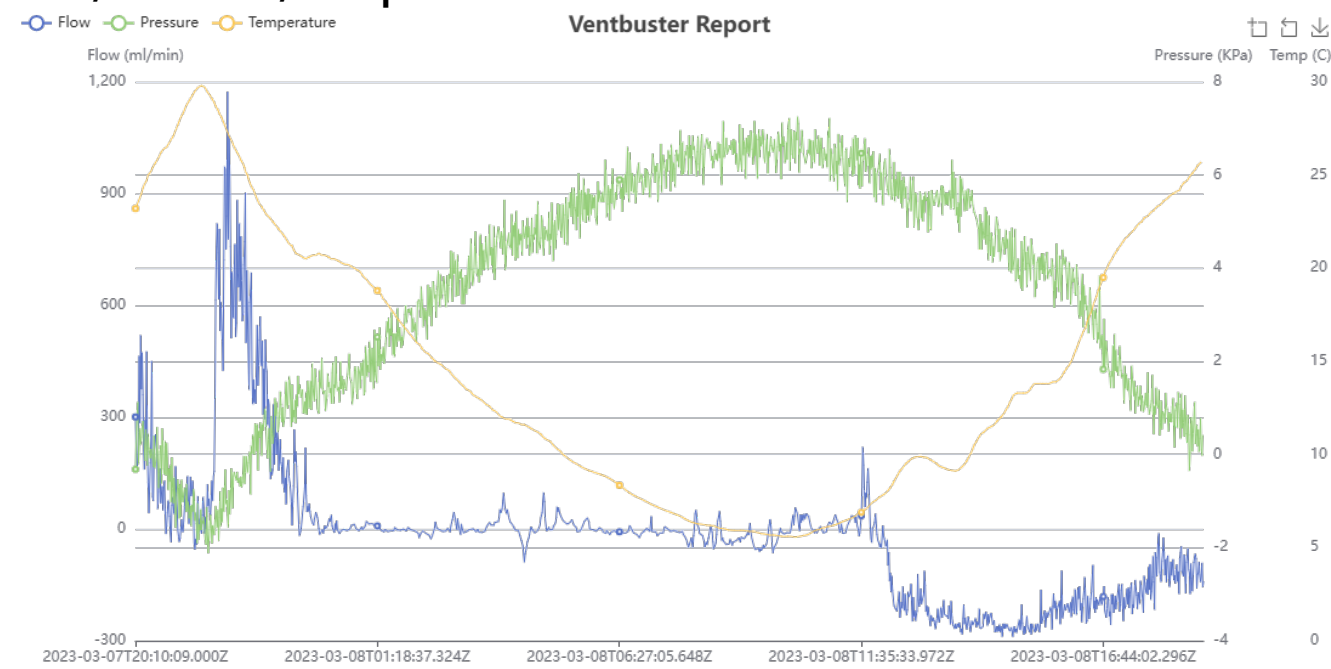
p - 0.0423 methane density at 1 atm; 60° F

0.454 - Conversion from lb to kg

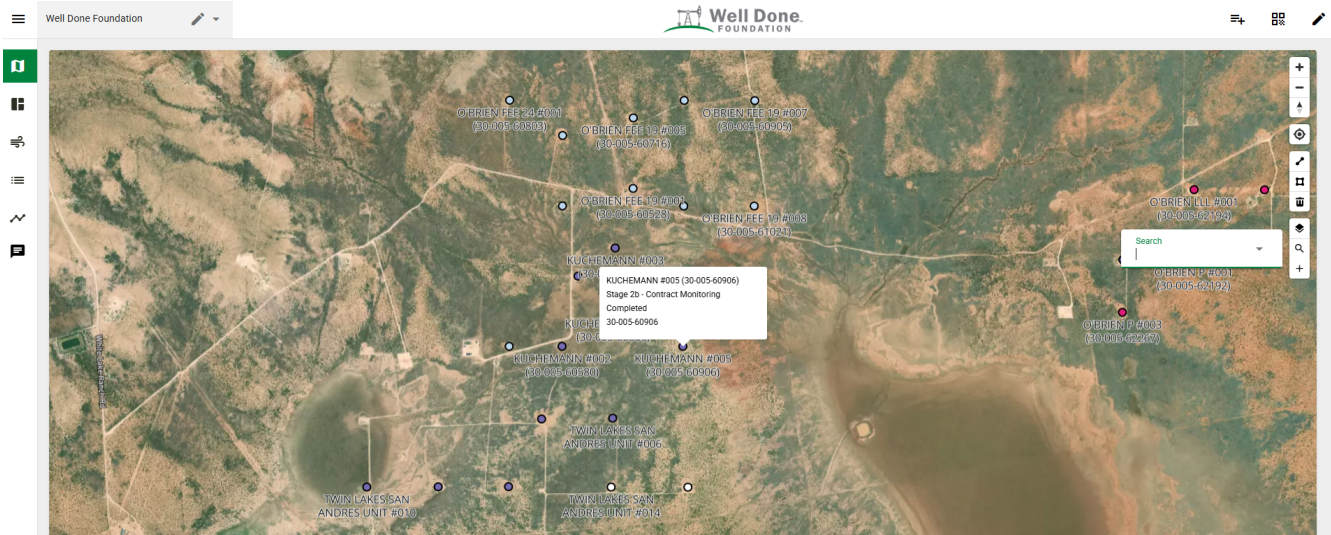
8760 - Conversion from hr to yr

Flow/Pressure/Temperature Timeseries

Ventbuster Report



Site Photos



Well Media

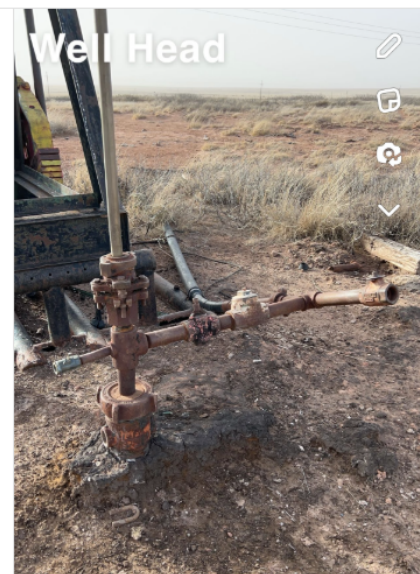
Gallery View

Well Media

Gallery View

Well Media

Gallery View





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C6+ Gas Analysis Report

| | | | |
|----------------------|--------------------|-----------------------|--|
| 16098G | Kucherman #005 | Kucherman #005 | |
| Sample Point Code | Sample Point Name | Sample Point Location | |
| Laboratory Services | 2023064661 | 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 22, 2023 16:19 | Feb 22, 2023 16:19 | Feb 27, 2023 10:53 | Mar 1, 2023 |
| Date Sampled | Date Effective | Date Received | Date Reported |
| Luis | | | |
| 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) | 93.4780 | 93.47729 | |
| CO2 (CO2) | 0.0420 | 0.04243 | |
| Methane (C1) | 4.1730 | 4.17253 | |
| Ethane (C2) | 0.7610 | 0.76114 | 0.2030 |
| Propane (C3) | 0.5510 | 0.55133 | 0.1520 |
| I-Butane (IC4) | 0.0680 | 0.06836 | 0.0220 |
| N-Butane (NC4) | 0.1650 | 0.16483 | 0.0520 |
| I-Pentane (IC5) | 0.0770 | 0.07737 | 0.0280 |
| N-Pentane (NC5) | 0.0790 | 0.07879 | 0.0290 |
| Hexanes Plus (C6+) | 0.6060 | 0.60592 | 0.2630 |
| TOTAL | 100.0000 | 100.0000 | 0.7490 |

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 |
| 114.8 | 113.7 | 115.1 | 114.000 |

| Calculated Total Sample Properties | |
|---|------------------------|
| GPA2145-16 *Calculated at Contract Conditions | |
| Relative Density Real | Relative Density Ideal |
| 0.9723 | 0.9722 |
| Molecular Weight | |
| 28.1588 | |

| 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 7:49 am | Methane: 4,173 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 494990

DEFINITIONS

| | |
|---|---|
| Operator: CANYON E & P COMPANY 251 O'Connor Ridge Blvd. Irving, TX 75038 | OGRID: 269864 |
| | Action Number: 494990 |
| | 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 494990

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| | Action Number: 494990 |
| | Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA) |

QUESTIONS

| | |
|----------------------------|-------------------------------|
| Prerequisites | |
| [OGRID] Well Operator | [269864] CANYON E & P COMPANY |
| [API] Well Name and Number | [30-005-60906] KUCHEMANN #005 |
| 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 | 03/07/2023 |
| Latitude | 33.5919685 |
| Longitude | -104.0232925 |

| | |
|---|--------------|
| 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) | 22.7 |
| Average flow temperature in degrees Celsius (°C) | 14.5 |
| Average gauge flow pressure in kilopascals (kPag) | 3.6 |
| Methane concentration in part per million (ppm) | 4,173 |
| Methane emission rate in grams per hour (g/hr) | 0.00 |
| Testing Method | Steady State |

| | |
|---|----------------------|
| Monitoring Contractor | |
| <i>Please answer all the questions in this group.</i> | |
| Name of monitoring contractor | WELL DONE MEXICO LLC |