Test Report

Start Date: Thu Mar 02 2023 19:02:33 GMT+0000 (Coordinated Universal Time)
End Date: Fri Mar 03 2023 17:22:55 GMT+0000 (Coordinated Universal Time)
Device: VB100-0020
Well Licensee: 30-005-29024
Well Name: Cato San Andres 587
UWI: 30-005-29024
Well License Number: 30-005-29024
Surface Location: State of NM
Bottom Hole Location: Unknown

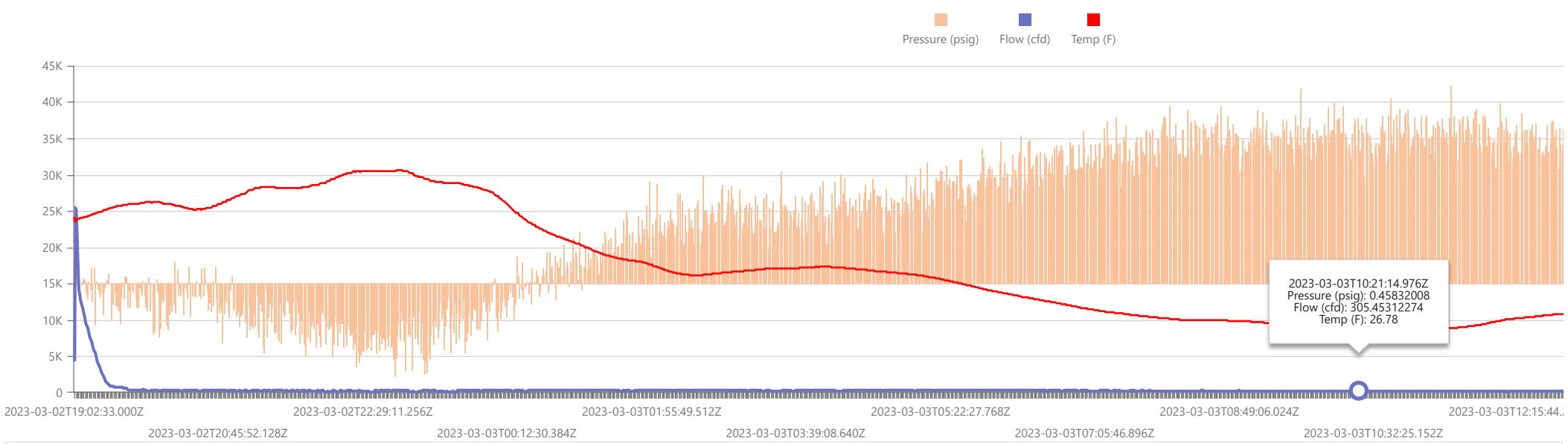
Test Operator: Sean O. Jacobson
Authorized By: State of NM
Test Reason: IIJA Pre Plugging
Scope Of Work: 12 Hour
AFE Number: 52100-00000073108
GPS: 33.62017,-103.84970
Notes: GTG
Prepared By: Curtis Shuck, QMS

Flow / Pressure Test

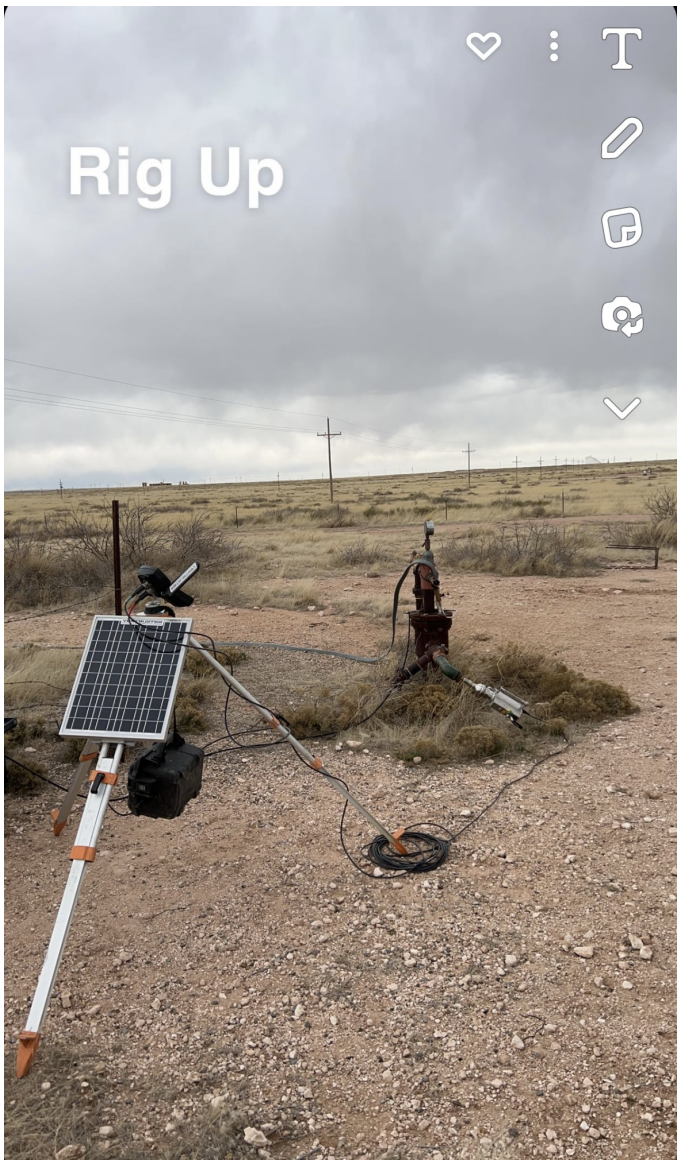
Flow Duration	Average Flowrate	Average Pressure	Average Flow Temperature	Average CH4 Mass
22 hrs 19 minutes	448.0489	0.1781	46.3405	43.25 g/hr
Duration	cfd	psig	°F	

Methane Calculation: 717 grams CH4 per cubic meter (717 g/m^3 x 12.6881 m^3/day = 9097.37 g/day total /24 = 379.06 g/hour x 0.1141 (methane concentration) = **43.25 g/hour CH4**). **Methane, gas** weighs 0.000717 *gram per cubic centimeter* or 0.717 *kilgram per cubic meter*, i.e. density of *methane, gas* is equal to 0.717 kg/m^3; at 0°C (32°F or 273.15K) at standard atmospheric pressure. In imperial or US customary measurement system, the density is equal to 0.0448 *pound per cubic foot* [lb/ft^3], or 0.0004144 *ounce per cubic inch* [oz/$inch^3$].

Flow / Pressure / Temperature Timeseries



#	Date	Note
1	2023-03-06	Rigged down flow test.
2	2023-03-05	Arrived 12:20pm 3/5/2023. Rigged up flow test. SP VB #20
3	2023-03-03	Arrived 10:23am 3/3/2023. Rigged down flow test.
4	2023-03-02	Arrived 11:41am 3/2/2023. Rigged up Ventbuster #20 for flow testing.



LABORATORY SERVICES Natural Gas Analysis
www.permianls.com
575.397.3713 2609 W Marland Hobbs NM 88240

C6+ Gas Analysis Report

16163G	CSAU #587 Pre Plug	CSA #587
Sample Point Code	Sample Point Name	Sample Point Location

Laboratory Services	2023065059	Tedlar Bag	SOJ - Spot
Source Laboratory	Lab File No	Container Identity	Sampler

USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name

Mar 2, 2023 11:45	Mar 2, 2023 11:45	Mar 3, 2023 08:45	Mar 6, 2023
Date Sampled	Date Effective	Date Received	Date Reported

		Torrance	
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)	61.1680	61.16703	
CO2 (CO2)	4.7340	4.73432	
Methane (C1)	11.4100	11.41037	
Ethane (C2)	10.4140	10.414	2.7840
Propane (C3)	8.5760	8.57618	2.3620
I-Butane (IC4)	0.8930	0.8934	0.2920
N-Butane (NC4)	1.6860	1.68567	0.5310
I-Pentane (IC5)	0.4400	0.44042	0.1610
N-Pentane (NC5)	0.3390	0.33873	0.1230
Hexanes Plus (C6+)	0.3400	0.33988	0.1480
TOTAL	100.0000	100.0000	6.4010

Method(s): Gas C6+ - GPA 2261, Extended Gas - GPA 2286, Calculations - GPA 2172

Gross Heating Values (Real, BTU/ft³)

14.696 PSI @ 60.00 Â°F		14.73 PSI @ 60.00 Â°F	
Dry	Saturated	Dry	Saturated
650.3	640.1	651.8	641.6

Calculated Total Sample Properties

GPA2145-16 *Calculated at Contract Conditions

Relative Density Real	Relative Density Ideal
1.0493	1.0474

Molecular Weight: 30.3400

C6+ Group Properties

Assumed Composition

C6 - 60.000% C7 - 30.000% C8 - 10.000%

Field H2S: 1 PPM

PROTREND STATUS:
Passed By Validator on Mar 7, 2023

DATA SOURCE:
Imported

PASSED BY VALIDATOR REASON:
Close enough to be considered reasonable.

VALIDATOR:
Brooke Rush

VALIDATOR COMMENTS:
OK

Analyzer Information

Device Type:	Gas Chromatograph	Device Make:	Shimadzu
Device Model:	GC-2014	Last Cal Date:	Feb 13, 2023

Source	Date	Notes
Brooke Rush	Mar 7, 2023 2:31 pm	Methane = 114,100 PPM

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

DEFINITIONS

Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 276803
	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 276803

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Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 276803
	Action Type: [UF-OMA] Pre-Plug Methane Monitoring (UF-OMA-MMA)

QUESTIONS

Prerequisites	
[OGRID] Well Operator	**[248802] CANO PETRO OF NEW MEXICO, INC.**
[API] Well Name and Number	**[30-005-29024] CATO SAN ANDRES UNIT #587**
Well Status	**Reclamation Fund Approved**

Monitoring Event Information *Please answer all the questions in this group.*	
Reason For Filing	**Pre-Plug Methane Monitoring**
Date of monitoring	03/02/2023
Latitude	33.6200905
Longitude	-103.85009

Monitoring Event Details *Please answer all the questions in this group.*	
Flow rate in cubic meters per day (m^3/day)	12.68
Test duration in hours (hr)	22.2
Average flow temperature in degrees Celsius (°C)	7.9
Average gauge flow pressure in kilopascals (kPag)	1.2
Methane concentration in part per million (ppm)	114,100
Methane emission rate in grams per hour (g/hr)	43.25
Testing Method	Steady State

Monitoring Contractor *Please answer all the questions in this group.*	
Name of monitoring contractor	Well Done New Mexico LLC