



Orphan Well Pre Plugging Methane Quatification Report

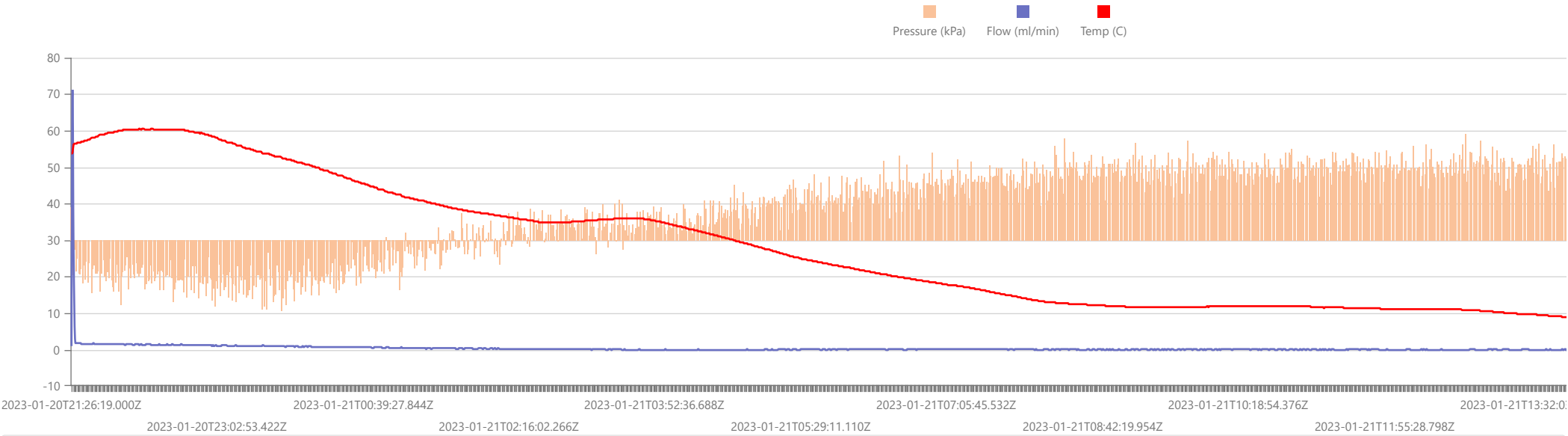
Start Date: Fri Jan 20 2023 21:26:19 GMT+0000 (Coordinated Universal Time) End Date: Sat Jan 21 2023 18:19:11 GMT+0000 (Coordinated Universal Time) Device: VB100-0049 Well Licensee: 30-005-20071 Well Name: Cato San Andres Unit 127 UWI: 30-005-20071 Well License Number: 30-005-20071 Surface Location: 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 Hours AFE Number: 52100-00000073108 GPS: 33.61080,-103.86129 Notes: GTG Prepared By: Curtis Shuck, QMS
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Flow / Pressure Test

Flow Duration 20 hrs 51 minutes Duration	Average Flowrate 0.3232 m3/d	Average Pressure 0.7376 kPag	Average Flow Temperature 4.9739 °C	Average CH4 Mass 1.05 g/hr CH4 Concentration 108,670 ppm
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Methane Calculation: 717 grams CH4 per cubic meter (717 g/m³ x 0.3232 m³/day = 231.73 g/day total /24 = 9.66 g/hour x 0.10867 (methane concentration) = **1.05 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/m³; 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/ft³], or 0.0004144 *ounce per cubic inch* [oz/inch³].

Flow / Pressure / Temperature Timeseries



#	Date	Note
1	2023-01-23	Arrived 11:01am January 23rd, 2023. Rigged down ventbuster.
2	2023-01-22	Arrived 1:29pm January 20th, 2023. Conducted field gas analysis then collected gas sample. Rigged up ventbuster #49 for flow testing.

Weather in Roswell, January 20

Weather Forecast for January 20 in Roswell, New Mexico - temperature, wind, atmospheric pressure, humidity and precipitations. Detailed hourly weather chart.

January 18	January 19	Select date: 📅	January 21	January 22
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January 20, 2023

	Atmospheric conditions and temperature °F	RealFeel °F	Atmospheric pressure inHg	Wind speed mph	Humidity
Night	+32°	+25°	26.3	↙ SW 6.3	40%
Morning	+21°	+16°	26.3	↖ NW 3.6	60%
Day	+54°	+54°	26.3	↗ S 11.4	19%
Evening	+52°	+52°	26.3	➡ W 14.5	25%

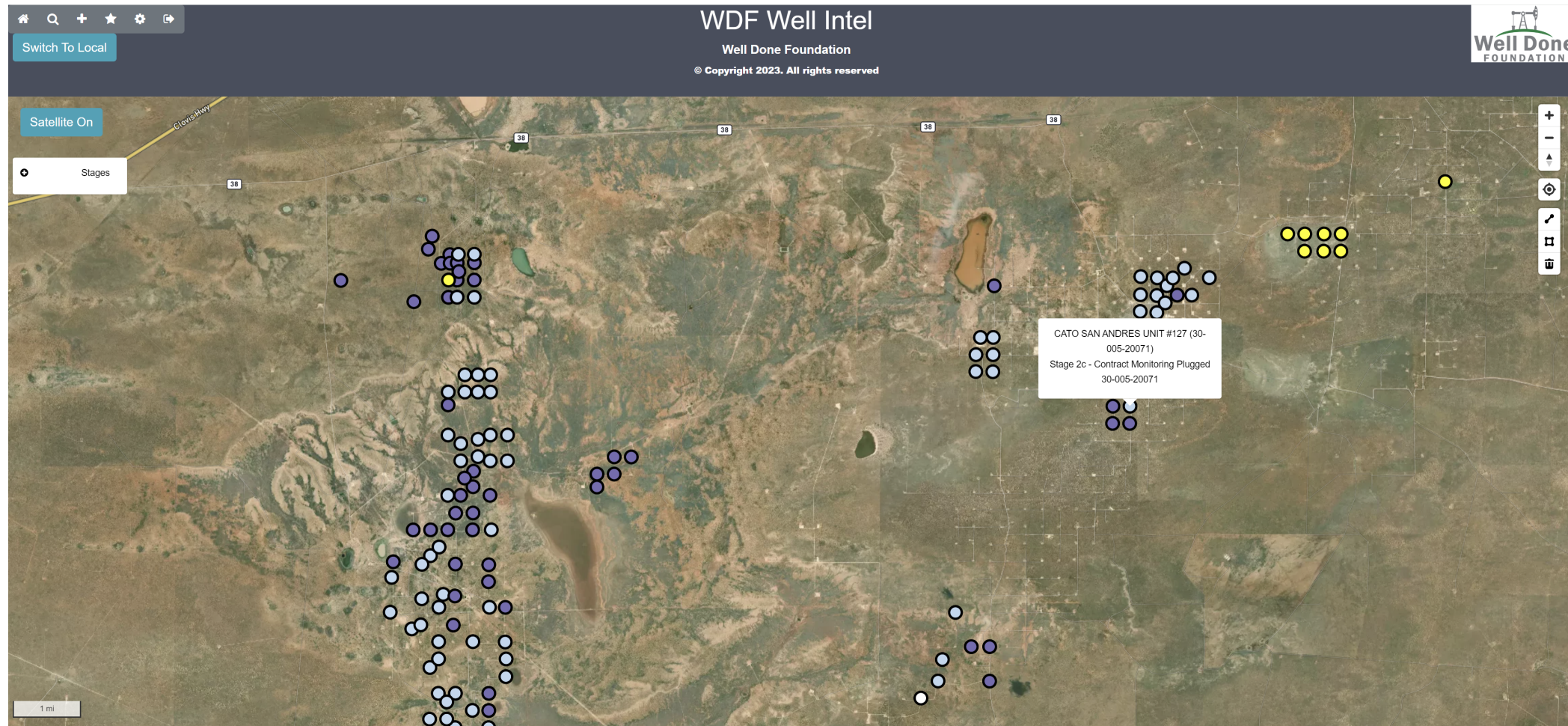
Weather in Roswell, January 21

Weather Forecast for January 21 in Roswell, New Mexico - temperature, wind, atmospheric pressure, humidity and precipitations. Detailed hourly weather chart.

January 19	January 20	Select date: 📅	January 22	January 23
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January 21, 2023

	Atmospheric conditions and temperature °F	RealFeel °F	Atmospheric pressure inHg	Wind speed mph	Humidity
Night	+34°	+27°	26.3	➡ W 7.6	36%
Morning	+25°	+19°	26.3	➤ SE 4.9	50%
Day	+50°	+50°	26.4	↖ NW 15.4	19%
Evening	+43°	+36°	26.4	↖ NW 11.9	26%





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

C6+ Gas Analysis Report

15883G	CSAU #127 Pre Plugging	CSA #127
Sample Point Code	Sample Point Name	Sample Point Location
Laboratory Services	2023063322	Tedlar Bag
Source Laboratory	Lab File No	Container Identity
USA	USA	USA
District	Area Name	Field Name
Jan 20, 2023 13:04	Jan 20, 2023 13:04	Jan 27, 2023 10:42
Date Sampled	Date Effective	Date Received
Luis		
Ambient Temp (°F)	Flow Rate (Mcf)	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)	80.8090	80.80905	
CO2 (CO2)	0.1030	0.10273	
Methane (C1)	10.8670	10.86725	
Ethane (C2)	2.2000	2.19977	0.5880
Propane (C3)	1.6530	1.65311	0.4550
I-Butane (IC4)	0.1480	0.14796	0.0480
N-Butane (NC4)	0.3210	0.32118	0.1010
I-Pentane (IC5)	0.2260	0.22574	0.0830
N-Pentane (NC5)	0.3740	0.3742	0.1360
Hexanes Plus (C6+)	3.2990	3.299	1.4310
TOTAL	100.0000	100.0000	2.8420

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:	Jan 23, 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
400.2	394.3	401.1	395.2

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
1.0227	1.0218
Molecular Weight	
29.5962	

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

Field H2S
0 PPM

PROTREND STATUS:

Passed By Validator on Jan 31, 2023

DATA SOURCE:

Imported

PASSED BY VALIDATOR REASON:

First sample taken @ this point, composition looks reasonable

VALIDATOR:

Brooke Rush

VALIDATOR COMMENTS:

OK

Source	Date	Notes
Brooke Rush	Jan 31, 2023 9:03 pm	Methane = 108,670 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

Action 278163

DEFINITIONS

Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 278163
	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 278163

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Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 278163
	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	[30-005-20071] CATO SAN ANDRES UNIT #127
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	01/20/2023
Latitude	33.61080
Longitude	-103.86129

Monitoring Event Details

Please answer all the questions in this group.

Flow rate in cubic meters per day (m³/day)	0.32
Test duration in hours (hr)	20.9
Average flow temperature in degrees Celsius (°C)	4.9
Average gauge flow pressure in kilopascals (kPag)	0.7
Methane concentration in part per million (ppm)	108,670
Methane emission rate in grams per hour (g/hr)	1.05
Testing Method	Steady State

Monitoring Contractor

Please answer all the questions in this group.

Name of monitoring contractor	Well Done New Mexico LLC
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