



## Orphan Well Pre Plugging Methane Quantification Report

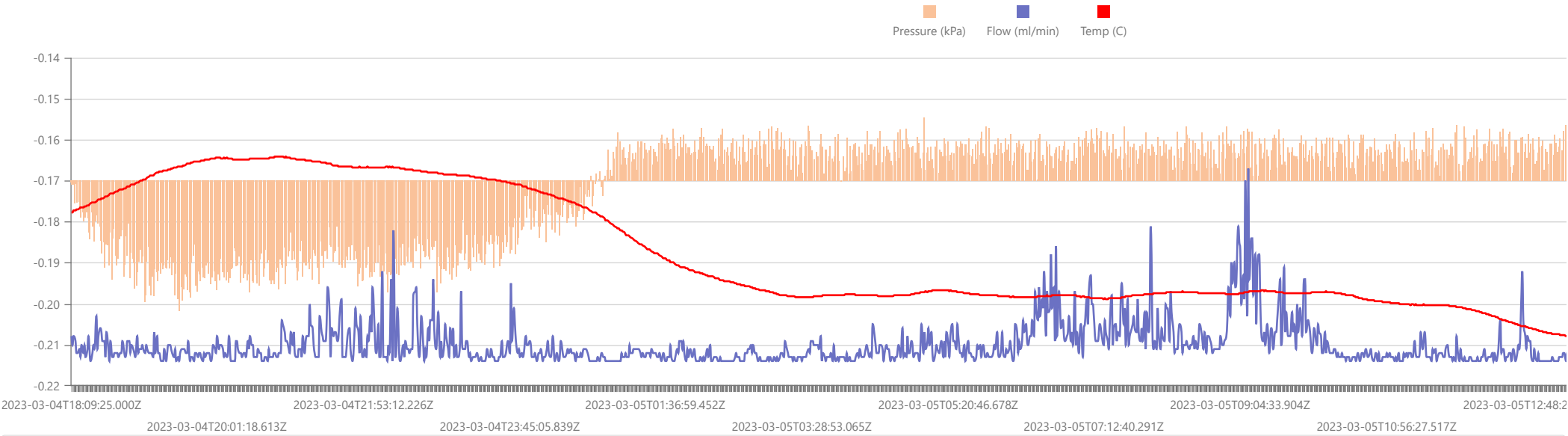
<b>Start Date:</b> Sat Mar 04 2023 18:09:25 GMT+0000 (Coordinated Universal Time) <b>End Date:</b> Sun Mar 05 2023 18:21:01 GMT+0000 (Coordinated Universal Time) <b>Device:</b> VB100-0016 <b>Well Licensee:</b> 30-005-28012 <b>Well Name:</b> Cato San Andres 560 <b>UWI:</b> 30-005-28012 <b>Well License Number:</b> 30-005-28012 <b>Surface Location:</b> State of NM <b>Bottom Hole Location:</b> Unknown	<b>Test Operator:</b> Sean O. Jacobson <b>Authorized By:</b> State of NM <b>Test Reason:</b> IJJA Pre Plugging <b>Scope Of Work:</b> 12 Hour <b>AFE Number:</b> 52100-00000073108 <b>GPS:</b> 33.62745,-103.84957 <b>Notes:</b> GTG <b>Prepared By:</b> Curtis Shuck, QMS
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## Flow / Pressure Test

<b>Flow Duration</b> 24 hrs 10 minutes Duration	<b>Average Flowrate</b> 0.00 m3/d	<b>Average Pressure</b> -0.1341 kPag	<b>Average Flow Temperature</b> 16.3789 °C	<b>Average CH4 Mass</b> 0.00 g/hr  <b>CH4 Concentration</b> 2,350 ppm
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**Methane Calculation:** 717 grams CH4 per cubic meter (717 g/m³ x -0.2096 m³/day = -150.28 g/day total /24 = -6.26 g/hour x 0.00235 (methane concentration) = **0.01 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	2023-09-23	ces: on location for post plug monitoring. Good monument. Field gas is non detect. Collect gas sample. Rig up Semtech High Flow for post quantification. Green Ribbon. WILDCAT OUT!
2	2023-03-05	Arrived 11:20am 3/5/2023. Rigged down flow test. SP
3	2023-03-04	Arrived 11:05am 3/4/2023. Found tripod had been knocked down by cattle. Data cable rat nested as well. Stopped flow test. Unplug data cable from VB unit then reset tripod over well pipe and secured with strap. Re-rolled data cable neatly then hooked back into VB unit and comm. No visible damage to unit/tripod/comm/solar. Comm established communication with unit immediately upon reconnecting data cable. Flipped to high flow. Started new test.
4	2023-03-03	Arrived 12:09am 3/3/2023. Rigged up Ventbuster #16 for flow testing.

### Weather in Roswell, March 4

Weather Forecast for March 4 in Roswell, New Mexico - temperature, wind, atmospheric pressure, humidity and precipitations. Detailed hourly weather chart.

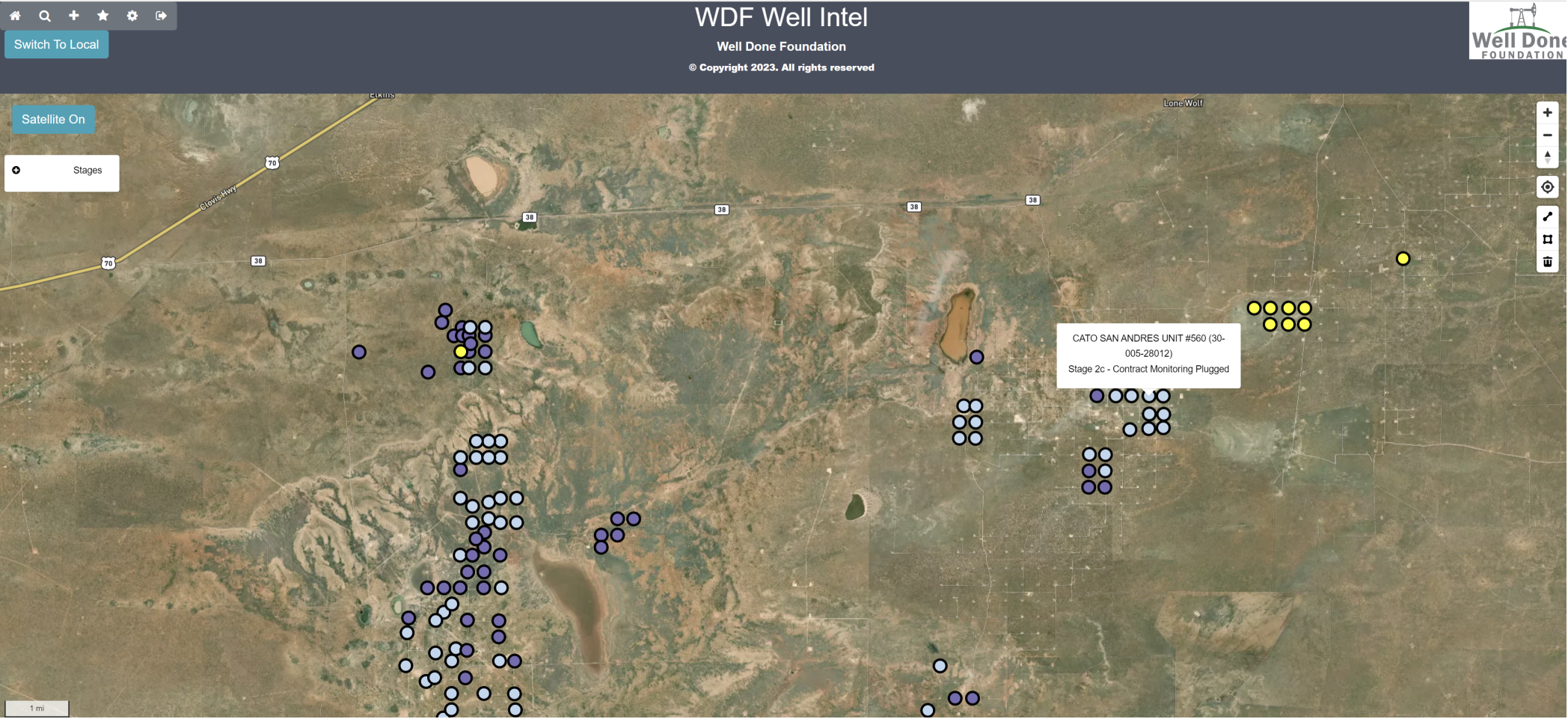
March 02	March 03	Select date: 📅	March 05	March 06	
March 04, 2023					
	Atmospheric conditions and temperature °F	RealFeel °F	Atmospheric pressure inHg	Wind speed mph	Humidity
Night	🌙 +45°	+39°	26.1	⬆️ NW 9.4	27%
Morning	🌤️ +36°	+30°	26.3	⬇️ N 5.8	43%
Day	🌤️ +63°	+63°	26.3	⬇️ SE 8.3	12%
Evening	🌙 +61°	+61°	26.3	⬆️ S 11.6	14%

### Weather in Roswell, March 5

Weather Forecast for March 5 in Roswell, New Mexico - temperature, wind, atmospheric pressure, humidity and precipitations. Detailed hourly weather chart.

March 03	March 04	Select date: 📅	March 06	March 07	
March 05, 2023					
	Atmospheric conditions and temperature °F	RealFeel °F	Atmospheric pressure inHg	Wind speed mph	Humidity
Night	🌙 +43°	+39°	26.2	↙ SW 4.9	21%
Morning	🌤️ +39°	+34°	26.2	⬆️ S 7.8	30%
Day	🌤️ +77°	+77°	26.3	↙ SW 14.3	7%
Evening	🌥️ +64°	+64°	26.3	➡️ W 9.6	9%









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

## C6+ Gas Analysis Report

16220G	CSAU #560 Pre Plug	CSA #560	
Sample Point Code	Sample Point Name	Sample Point Location	
Laboratory Services	2023065364	Tedlar Bag	S.O.J. - Spot
Source Laboratory	Lab File No	Container Identity	Sampler
USA	USA	USA	New Mexico
District	Area Name	Field Name	Facility Name
Mar 3, 2023 12:14	Mar 3, 2023 12:14	Mar 9, 2023 11:36	Mar 9, 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)	97.8830	97.88218	
CO2 (CO2)	0.5720	0.57249	
Methane (C1)	0.2350	0.23542	
Ethane (C2)	0.3360	0.33557	0.0900
Propane (C3)	0.3760	0.3765	0.1040
I-Butane (IC4)	0.0660	0.06584	0.0220
N-Butane (NC4)	0.1670	0.167	0.0530
I-Pentane (IC5)	0.0580	0.05789	0.0210
N-Pentane (NC5)	0.0000	0	0.0000
Hexanes Plus (C6+)	0.3070	0.30712	0.1330
TOTAL	100.0000	100.0000	0.4230

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
43.6	43.8	43.7	43.9

Calculated Total Sample Properties	
GPA2145-16 *Calculated at Contract Conditions	
Relative Density Real	Relative Density Ideal
0.9819	0.9819
Molecular Weight	
28.4400	

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 13, 2023  
**DATA SOURCE:** Imported

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

**VALIDATOR:**  
Brooke Rush  
**VALIDATOR COMMENTS:**  
OK

Source	Date	Notes
Brooke Rush	Mar 13, 2023 9:18 am	Methane = 2,350 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 278239

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Operator: CANO PETRO OF NEW MEXICO, INC. 801 Cherry Street Fort Worth, TX 76102	OGRID: 248802
	Action Number: 278239
	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

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**QUESTIONS**

<b>Prerequisites</b>	
[OGRID] Well Operator	[248802] CANO PETRO OF NEW MEXICO, INC.
[API] Well Name and Number	[30-005-28012] CATO SAN ANDRES UNIT #560
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	04/03/2023
Latitude	33.62745
Longitude	-103.84957

**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)	24.0
Average flow temperature in degrees Celsius (°C)	16.3
Average gauge flow pressure in kilopascals (kPag)	-0.1
Methane concentration in part per million (ppm)	2,350
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	Well Done New Mexico LLC
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