



Orphan Well Pre Plugging Methane Quantification Report

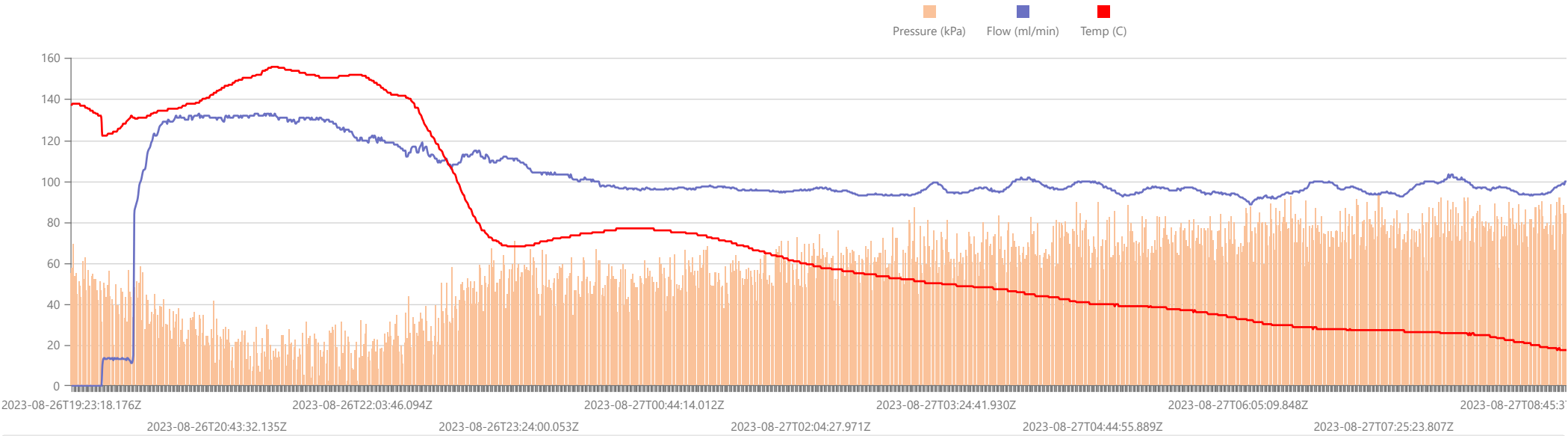
Start Date: Sat Aug 26 2023 19:23:37 GMT+0000 (Coordinated Universal Time) End Date: Sun Aug 27 2023 12:44:29 GMT+0000 (Coordinated Universal Time) Device: VB100-0005 Well Licensee: EMNRD OCD Well Name: BRC MADERA 001 UWI: 30-015-22373 Well License Number: 30-015-22363 Surface Location: unknown Bottom Hole Location: unknown	Test Operator: ces Authorized By: EMNRD Test Reason: IJJA PRE PLUG Scope Of Work: 12 - hour AFE Number: 23.002. GPS: 32.36848,-104.20939 Notes: Casing Prepared By: Curtis Shuck, QMS
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Flow / Pressure Test

Flow Duration 17 hrs 19 minutes Duration	Average Flowrate 98.3278 m3/d	Average Pressure 3.0597 kPag	Average Flow Temperature 32.6233 °C	Average CH4 Mass 2,764.32 g/hr Average CH4 Mass 941,030 ppm
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Methane Calculation: 717 grams CH4 per cubic meter (717 g/m³ x 98.3278 m³/day = 70501.03 g/day total /24 = 2937.54 g/hour x 0.94103 (methane concentration) = **2764.32 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	2023-08-27	ces: Back on location at 06:45 to stop test and rig down. Wait for the Drake Crew to get as much run time on the test as possible. No decline. Test remained steady through the night. Pull EOT Gas Sample. Stop Test and rig down. Site back to the Drake Crew. - WILDCAT OUT!
2	2023-08-26	ces: On location of the BRC Madera with the Drake Crew. Rig up VB100-005 to the tubing. Gas is steady, even after the well received 80 bbls of Brine to kill. Run the Methane Flow Test all night with plans to stop test and rig down at first light. Pull BOT Gas Sample.





BRC Madera #001 - Looking West over the RV Park



BRC Madera #001 - Gas Sample for Laboratory Analysis



BRC Madera #001 - Methane Quantification Test in Progress

Weather in Carlsbad, August 26

Weather Forecast for August 26 in Carlsbad, New Mexico - temperature, wind, atmospheric pressure, humidity and precipitations. Detailed hourly weather chart.

August 24	August 25	Select date:	August 27	August 28
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August 26, 2023

	Atmospheric conditions and temperature °F	RealFeel °F	Atmospheric pressure inHg	Wind speed mph	Humidity
Night	+72°	+73°	26.9	► W 5.8	72%
Morning	+68°	+68°	26.9	◄ NW 3.8	82%
Day	+93°	+93°	27	► NE 5.6	33%
Evening	+90°	+93°	26.9	◄ SW 7.2	46%

Weather in Carlsbad, August 27

Weather Forecast for August 27 in Carlsbad, New Mexico - temperature, wind, atmospheric pressure, humidity and precipitations. Detailed hourly weather chart.

August 25	August 26	Select date:	August 28	August 29
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August 27, 2023

	Atmospheric conditions and temperature °F	RealFeel °F	Atmospheric pressure inHg	Wind speed mph	Humidity
Night	+77°	+77°	26.9	► NE 5.1	69%
Morning	+73°	+75°	27	◄ NW 6.7	67%
Day	+91°	+95°	27	◄ E 3.6	41%
Evening	+95°	+106°	27	► S 6.9	49%

www.permianis.com
675.397.3713 2609 W Markland Hobbs NM 88240

C6+ Gas Analysis Report

18171G
Sample Point Code

BRC Madera #1 BOT Pre Plug
Sample Point Name

BRC Madera #1 Tubing
Sample Point Location

Laboratory Services
Source Laboratory

2023074445
Lab File No

BAG
Container Identity

CES - Spot
Sampler

USA
District

USA
Area Name

USA
Field Name

New Mexico
Facility Name

Aug 26, 2023 13:10
Date Sampled

Aug 26, 2023 13:10
Date Effective

Aug 28, 2023 12:32
Date Received

Aug 29, 2023
Date Reported

Ambient Temp (°F)

Flow Rate (Mcf)

0
Analyst

Press PSI @ Temp °F
Source Conditions

Well Done Foundation
Operator

NG
Lab Source Description

Component	Normalized Mol %	Un-Normalized Mol %	GPM
H2S (H2S)	0.0000	0	
Nitrogen (N2)	2.4940	2.49402	
CO2 (CO2)	0.9200	0.92019	
Methane (C1)	94.1030	94.10258	
Ethane (C2)	1.9550	1.955	0.5230
Propane (C3)	0.2250	0.22505	0.0620
I-Butane (IC4)	0.0590	0.05889	0.0190
N-Butane (NC4)	0.0340	0.03362	0.0110
I-Pentane (IC5)	0.0320	0.03202	0.0120
N-Pentane (NC5)	0.0140	0.01427	0.0050
Hexanes Plus (C6+)	0.1640	0.16437	0.0710
TOTAL	100.0000	100.0000	0.7030

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

Analyzer Information

Device Type: Device Make: Device Model: Last Cal Date:

Source	Date	Notes
	Sep 1, 2023 3:10 pm	Methane: 941,030

Gross Heating Values (Real, BTU/ft³)
14.696 PSI @ 60.00 Å°F 14.73 PSI @ 60.00 Å°F
Dry Saturated Dry Saturated
1,007.5 991.3 1,009.8 993.6

Calculated Total Sample Properties
GPA2145-16 *Calculated at Contract Conditions
Relative Density Real Relative Density Ideal
0.5923 0.5913
Molecular Weight
17.1272

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

PROTREND STATUS: DATA SOURCE:
Passed By Validator on Sep 1, 2023 Imported
PASSED BY VALIDATOR REASON:
First sample taken @ this point, composition looks reasonable
VALIDATOR: Rush
OK

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

CONDITIONS

Action 280240

CONDITIONS

Operator: Energy Acumen LLC 10103 Gutierrez Rd NE Albuquerque, NM 87111	OGRID: 373817
	Action Number: 280240
	Action Type: [IM-SD] Well File Support Doc (ENV) (IM-BWF)

CONDITIONS

Created By	Condition	Condition Date
jwrinkle	None	10/27/2023