Well Done FOUNDATION

Pre Plugging Test Report

VENTBUSTER INSTRUMENTS

Start Date: March 30, 2023
End Date: March 30, 2023
Device: VB100
Well Licensee: EMNRD - OCD
Well Name: O'Brien Fee 19 #002
UWI: 30-005-60565
Well License Number: 30-005-60565
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 Minimum
AFE Number: 52100-0000072995
GPS: 33.599224,-104.0232391
Notes: GTG

Report Prepared By: CES March 30, 2023

Orphan Well Flow Test

Average Flowrate	Average Flow Temperature	Average Flow Pressure	Flow Duration	Methane Concentration	Methane Emissions
0.61	**15.9**	**1.4**	**12.0**	**91,741.25**	**1.67**
m3/d	°C	kPag	hours	PPM	g/hour

Methane Calculations

- [1] Methane Calculation: 717 grams CH4 per cubic meter (717 x 0.6088 m3/day = 436.51 g/day total /24 = 18.19 g/hour x 0.091741 (methane concentration) = **1.67 g/hour CH4**). **Methane, gas** weighs 0.000717 *gram per cubic centimeter* or 0.717 *kilogram 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 0.044 *pound per cubic foot* [lb/ft^3].

O' Brien Field Methane Emission Averaging Analysis

O'Brien Orphan Well CH4 Averaging - Applied to the 10 Wells Outside Sample Set - CES

Prepared: 3.30.3023

Well Name	Well #	API #	County	Purchase Order	Gas Sample	CH4/PPM	Total LELs/PPM	CH4 Flow @ m3/day	Methane Emission @ g/hour	Post Plug CH4
O'Brien Deming 13	1	30-005-60922	Chaves	52100-72995	19-Feb	1,380	8,390	0.02	0.001	0
O'Brien Deming 6	1	30-005-60634	Chaves	52100-72995	18-Dec	0	5,800	0.000	0.000	0
O'Brien Deming 6	2	30-005-60730	Chaves	52100-72995	18-Dec	0	3,110	0.000	0.000	0
O'Brien Fee 18	1	30-005-60619	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 18	2	30-005-60640	Chaves	52100-72995	21-Feb	493,430	764,050	2.400	35.378	0
O'Brien Fee 18	3	30-005-60725	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 18	4	30-005-60902	Chaves	52100-72995	19-Feb	0	4,100	0.000	0.000	0
O'Brien Fee 18	6	30-005-61246	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	1	30-005-60528	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	2	30-005-60565	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	3	30-005-60566	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	4	30-005-60654	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	5	30-005-60716	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	6	30-005-60804	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	7	30-005-60905	Chaves	52100-72995	21-Feb	8,610	11,520	0.04	0.01	
O'Brien Fee 19	8	30-005-61021	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 24	1	30-005-60803	Chaves	52100-72995	19-Feb	160,400	252,660	0	0	0
O'Brien Fee 24	2	30-005-60923	Chaves	52100-72995	21-Feb	8,360	8,891	0.14	0.035	0
O'Brien Fee 25	5	30-005-60655	Chaves	52100-72995	23-Feb	44,050	133,860	0.01	0.013	0
O' Brien Lightcap 7	1	30-005-60815	Chaves	52100-72998	18-Dec	0	3,680	0	0	Not Plugged
O' Brien Lightcap 7	2	30-005-60816	Chaves	52100-72998	19-Dec	0	3,230	0	0	
O' Brien LLL	1	30-005-62194	Chaves	52100-72998	20-Dec	510	2,128	0	0	0
O' Brien P	1	30-005-62192	Chaves	52100-72998	21-Dec	0	9,070	0	0	Not Plugged
O' Brien P	2	30-005-62247	Chaves	52100-72998	21-Dec	141,550	202,980	0	0	0
O' Brien P	3	30-005-62267	Chaves	52100-72998	21-Dec	609,570	709,530	7.13	129.843	0
O' Brien R	1	30-005-62190	Chaves	52100-72998	20-Dec	0	2,580	0	0	0

Total O'Brien Wells	O'Brien Well Sample Set Applied	% of Total O'Brien Wells Tested	% of Total O'Brien Wells Averaged	Sample Total CH4 PPM	Sample Total Explosive Gas PPM	Sample Total Flow m3/day	Sample Total CH4 Emission g/hour	Total O'Brien CH4 Emission g/hour
				1,467,860	2,125,579	9.7400	165.2800	
26	16	61.54	38.46	Sample Avg CH4 PPM	Sample Avg Explosive Gas PPM	Sample Average Flow m3/day	Sample Avg CH4 Emission g/hour	181.960
				91,741.25	132,849	*0.6088*	1.6680	

- [1] Methane Calculation: 717 grams CH4 per cubic meter (717 x 0.6088 m3/day = 436.51 g/day total /24 = 18.19 g/hour x 0.091741 (methane concentration) = **1.67 g/hour CH4**). **Methane, gas** weighs 0.000717 *gram per cubic centimeter* or 0.717 *kilogram 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 0.044 *pound per cubic foot* [lb/ft^3].

Well Done NEW MEXICO LLC™

333 Main Street Shelby, Montana 59474 / P.O. Box 10640 Bozeman, MT 59179 (406) 460-0903

TO: Jim Griswold, OCD

FROM: Curtis Shuck, WDNM

DATE: March 30, 3023

RE: O'Brien Orphan Well Field Averaging

MEMORANDUM

Well Done New Mexico LLC performed an Orphan Well Methane Emission Averaging Analysis on the O'Brien Field in Chaves County, NM that included 26 Orphan Wells in total. Of the total 26 Orphan Wells in the study group, 16 of them (61.54%) were randomly selected for the full Methane Emissions Testing, and the average of the Methane Concentration, in PPM, and the Average of the Methane Flow, in m3/day, was calculated and applied to the 10 Orphan Wells (38.46%) that did not receive the full Methane Emissions Testing.

The results of the O'Brien Field Averaging Analysis are shown below and attached herewith:

O'Brien Orphan Well CH4 Averaging - Applied to the 10 Wells Outside Sample Set - CES

Prepared: 3.30.3023

Well Name	Well #	API #	County	Purchase Order	Gas Sample	CH4/PPM	Total LELs/PPM	CH4 Flow @ m3/day	Methane Emission @ g/hour	Post Plug CH4
O'Brien Deming 13	1	30-005-60922	Chaves	52100-72995	19-Feb	1,380	8,390	0.02	0.001	0
O'Brien Deming 6	1	30-005-60634	Chaves	52100-72995	18-Dec	0	5,800	0.000	0.000	0
O'Brien Deming 6	2	30-005-60730	Chaves	52100-72995	18-Dec	0	3,110	0.000	0.000	0
O'Brien Fee 18	1	30-005-60619	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 18	2	30-005-60640	Chaves	52100-72995	21-Feb	493,430	764,050	2.400	35.378	0
O'Brien Fee 18	3	30-005-60725	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 18	4	30-005-60902	Chaves	52100-72995	19-Feb	0	4,100	0.000	0.000	0
O'Brien Fee 18	6	30-005-61246	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	1	30-005-60528	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	2	30-005-60565	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	3	30-005-60566	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	4	30-005-60654	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	5	30-005-60716	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	6	30-005-60804	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	7	30-005-60905	Chaves	52100-72995	21-Feb	8,610	11,520	0.04	0.01	
O'Brien Fee 19	8	30-005-61021	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 24	1	30-005-60803	Chaves	52100-72995	19-Feb	160,400	252,660	0	0	0
O'Brien Fee 24	2	30-005-60923	Chaves	52100-72995	21-Feb	8,360	8,891	0.14	0.035	0
O'Brien Fee 25	5	30-005-60655	Chaves	52100-72995	23-Feb	44,050	133,860	0.01	0.013	0
O' Brien Lightcap 7	1	30-005-60815	Chaves	52100-72998	18-Dec	0	3,680	0	0	Not Plugged
O' Brien Lightcap 7	2	30-005-60816	Chaves	52100-72998	19-Dec	0	3,230	0	0	
O' Brien LLL	1	30-005-62194	Chaves	52100-72998	20-Dec	510	2,128	0	0	0
O' Brien P	1	30-005-62192	Chaves	52100-72998	21-Dec	0	9,070	0	0	Not Plugged
O' Brien P	2	30-005-62247	Chaves	52100-72998	21-Dec	141,550	202,980	0	0	0
O' Brien P	3	30-005-62267	Chaves	52100-72998	21-Dec	609,570	709,530	7.13	129.843	0
O' Brien R	1	30-005-62190	Chaves	52100-72998	20-Dec	0	2,580	0	0	0

Total O'Brien Wells	O'Brien Well Sample Set Applied	% of Total O'Brien Wells Tested	% of Total O'Brien Wells Averaged		Sample Total CH4 PPM	Sample Total Explosive Gas PPM	Sample Total Flow m3/day	Sample Total CH4 Emission g/hour	Total O'Brien CH4 Emission g/hour
					1,467,860	2,125,579	9.7400	165.2800	
					Sample Avg CH4 PPM	Sample Avg Explosive Gas PPM	Sample Average Flow m3/day	Sample Avg CH4 Emission g/hour	
26	16	61.54	38.46		*91,741.25*	132,849	0.6088	1.6680	181.960

- [1] Methane Calculation: 717 grams CH4 per cubic meter (717 x 0.6088 m3/day = 436.51 g/day total /24 = 18.19 g/hour x 0.091741 (methane concentration) = **1.67 g/hour CH4**). **Methane, gas** weighs 0.000717 *gram per cubic centimeter* or 0.717 *kilogram 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 0.044 *pound per cubic foot* [lb/ft^3].

Well Name: O'Brien Wells – Field Averaging Applied to the 10 Wells Outside Sample Set

Well Number: 26 Total

Wells Sampled: 16 Total

- [1] Methane Calculation: 717 grams CH4 per cubic meter (717 x 0.6088 m3/day = 436.51 g/day total /24 = 18.19 g/hour x 0.091741 (methane concentration) = **1.67 g/hour CH4**). **Methane, gas** weighs 0.000717 *gram per cubic centimeter* or 0.717 *kilogram 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 0.044 *pound per cubic foot* [lb/ft^3].

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O'Brien Orphan Well CH4 Averaging - Applied to the 10 Wells Outside Sample Set - CES

Prepared: 3.30.3023

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O'Brien Fee 19	2	30-005-60565	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	3	30-005-60566	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	4	30-005-60654	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	5	30-005-60716	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
O'Brien Fee 19	6	30-005-60804	Chaves	52100-72995		*91,741.25*	132,849	*0.6088*	*1.668*	0
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O' Brien P	3	30-005-62267	Chaves	52100-72998	21-Dec	609,570	709,530	7.13	129.843	0
O' Brien R	1	30-005-62190	Chaves	52100-72998	20-Dec	0	2,580	0	0	0
Total O'Brien Wells		**O'Brien Well Sample Set Applied**	**% of Total O'Brien Wells Tested**	**% of Total O'Brien Wells Averaged**		**Sample Total CH4 PPM**	**Sample Total Explosive Gas PPM**	**Sample Total Flow m3/day**	**Sample Total CH4 Emission g/hour**	**Total O'Brien CH4 Emission g/hour**
						1,467,860	**2,125,579**	**9.7400**	**165.2800**	
						Sample Avg CH4 PPM	**Sample Avg Explosive Gas PPM**	**Sample Average Flow m3/day**	**Sample Avg CH4 Emission g/hour**	**181.960**
26		**16**	**61.54**	**38.46**		***91,741.25***	**132,849**	**0.6088**	**1.6680**	

- [1] Methane Calculation: 717 grams CH4 per cubic meter (717 x 0.6088 m3/day = 436.51 g/day total /24 = 18.19 g/hour x 0.091741 (methane concentration) = **1.67 g/hour CH4**). **Methane, gas** weighs 0.000717 *gram per cubic centimeter* or 0.717 *kilogram 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 0.044 *pound per cubic foot* [lb/ft^3].

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: CANYON E & P COMPANY 251 O'Connor Ridge Blvd. Irving, TX 75038	OGRID: 269864
	Action Number: 209749
	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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State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

QUESTIONS

Action 209749

QUESTIONS

Operator: CANYON E & P COMPANY 251 O'Connor Ridge Blvd. Irving, TX 75038	OGRID: 269864
	Action Number: 209749
	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	**[30-005-60565] O'BRIEN FEE 19 #002**
Well Status	**Plugged (not released)**

Monitoring Event Information *Please answer all the questions in this group.*	
Reason For Filing	**Pre-Plug Methane Monitoring**
Date of monitoring	03/30/2023
Latitude	33.599224
Longitude	-104.0232391

Monitoring Event Details *Please answer all the questions in this group.*	
Flow rate in cubic meters per day (m^3/day)	0.61
Test duration in hours (hr)	12.0
Average flow temperature in degrees Celsius (°C)	15.9
Average gauge flow pressure in kilopascals (kPag)	1.4
Methane concentration in part per million (ppm)	91,741
Methane emission rate in grams per hour (g/hr)	1.67
Testing Method	Steady State

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