

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date:

API No. 15
007-24068 - 0000

Company M&M Exploration, Inc.		Lease Z Bar		Well Number 9-5	
County Barber	Location 1900 FNL 350 FWL	Section 9	TWP 34	RNG (E/W) 14W	Acres Attributed 160
Field Aetna Gas Area		Reservoir Mississippian		Gas Gathering Connection ONEOK	
Completion Date 11/03/2013		Plug Back Total Depth 5166'		Packer Set at None	
Casing Size 4.5	Weight 10.5	Internal Diameter 4.052	Set at 5194'	Perforations 4732'	To 4792'
Tubing Size 2.375	Weight 4.7	Internal Diameter 1.995	Set at 4732'	Perforations	To
Type Completion (Describe) Single (Gas)		Type Fluid Production Saltwater/Crude		Pump Unit or Traveling Plunger? Yes / No None	
Producing Thru (Annulus / Tubing) Tubing		% Carbon Dioxide 0.1215		% Nitrogen 1.8304	
Vertical Depth(H)		Pressure Taps		Gas Gravity - G _g 0.6278	
				(Meter Run) (Prover) Size	
Pressure Buildup: Shut in <u>May 8</u> 20 <u>14</u> at <u>9:00</u> (AM) (PM) Taken <u>May 9</u> 20 <u>14</u> at <u>9:00</u> (AM) (PM)					
Well on Line: Started _____ 20____ at _____ (AM) (PM) Taken _____ 20____ at _____ (AM) (PM)					

OBSERVED SURFACE DATA

Duration of Shut-in _____ Hours

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter or Prover Pressure pslg (Pm)	Pressure Differential in Inches H ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P _i) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						675	689.4	675	689.4		
Flow											

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _s) (F _p) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F _g	Flowing Temperature Factor F _{tt}	Deviation Factor F _{sv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = _____ : (P_w)² = _____ : P_d = _____ % (P_c - 14.4) + 14.4 = _____ : (P_g)² = 0.207
(P_d)² = _____

(P _c) ² - (P _g) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _g ² 2. P _c ² - P _d ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: $\left[\frac{P_c^2 - P_w^2}{P_c^2 - P_g^2} \right]$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG $\left[\frac{P_c^2 - P_w^2}{P_c^2 - P_g^2} \right]$	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)

Open Flow Mcfd @ 14.65 psia Deliverability Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct. Executed this the 9th day of May, 20 14.

KCC WICHITA

Witness (if any) _____
For Commission _____

For Company _____
Checked by _____
MAY 15 2014

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I declare under penalty of perjury under the laws of the state of Kansas that I am authorized to request exempt status under Rule K.A.R. 82-3-304 on behalf of the operator M&M Exploration, Inc. and that the foregoing pressure information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon available production summaries and lease records of equipment installation and/or upon type of completion or upon use being made of the gas well herein named.

I hereby request a one-year exemption from open flow testing for the Z Bar 9-5 gas well on the grounds that said well:

(Check one)

- is a coalbed methane producer
- is cycled on plunger lift due to water
- is a source of natural gas for injection into an oil reservoir undergoing ER
- is on vacuum at the present time; KCC approval Docket No. _____
- is not capable of producing at a daily rate in excess of 250 mcf/D

I further agree to supply to the best of my ability any and all supporting documents deemed by Commission staff as necessary to corroborate this claim for exemption from testing.

Date: May 9, 2014

Signature: *Mark W. Lister*

Title: President

Instructions: If a gas well meets one of the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to claim exempt status for the gas well.

At some point during the current calendar year, wellhead shut-in pressure shall have been measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under **OBSERVED SURFACE DATA**. Shut-in pressure shall thereafter be reported yearly in the same manner for so long as the gas well continues to meet the eligibility criterion or until the claim of eligibility for exemption **IS** denied.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The form must be signed and dated on the front side as though it was a verified report of annual test results.

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MAY 15 2014

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Z-Bar 9-5		API # 15-007-24068		Sec 9 Twp 34S Rge 14W				500#x100"x1.250					
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Apr-1	62	91	345	620	40	10	215.00			24			
Apr-2	60	92	325	625	40	10	215.00			24			
Apr-3	62	91	250	620	40	10	215.00			24			
Apr-4	62	91	360	615	40	10	215.00			24			
Apr-5	60	91	350	610	40	10	215.00			24			
Apr-6	60	91	350	610	40	10	215.00			24			
Apr-7	64	91	345	610	40	10	215.00			24			
Apr-8	62	91	320	610	40	10	215.00	1720.00	1720.00	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Apr-9	65	90	360	615	40	10	215.00			24			
Apr-10	61	91	250	600	40	10	215.00			24			
Apr-11	60	90	260	600	40	10	215.00			24			
Apr-12	60	90	300	600	40	10	215.00			24			
Apr-13	63	92	345	610	40	10	215.00			24			
Apr-14	61	92	300	605	40	10	215.00			24			
Apr-15	63	91	270	600	40	10	215.00			24			
Apr-16	60	90	310	600	40	10	215.00	1720.00	3440.00	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Apr-17	62	92	355	600	40	10	215.00			24			
Apr-18	62	91	325	600	40	10	215.00			24			
Apr-19	62	90	280	600	40	10	215.00			24			
Apr-20	62	94	250	600	40	10	215.00			24			
Apr-21	65	92	340	600	40	10	215.00			24			
Apr-22	62	90	250	595	40	10	215.00			24			
Apr-23	62	90	350	595	40	10	215.00			24			
Apr-24	60	90	340	595	40	10	215.00	1720.00	5160.00	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Apr-25	65	90	255	600	40	10	215.00			24			
Apr-26	64	90	250	590	40	10	215.00			24			
Apr-27	64	90	350	590	40	10	215.00			24			
Apr-28	58	90	320	590	40	10	215.00			24			
Apr-29	58	90	250	595	40	10	215.00			24			
Apr-30	65	92	300	590	40	10	215.00			24			
								1290.00	6450.00				
TOTAL GAS PRODUCED				6450.00		MCF avg	215.00						

Fluid goes to 16-4 SWD

Vratil Production Services Inc.

509 N. Cedar
Medicine Lodge, KS 67104
tvratil@cyberlodg.com

KCC WICHITA
 MAY 15 2014
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Z-Bar 9-5		API # 15-007-24068		Sec 9 Twp 34S Rge 14W				500#x100"x1.250					
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Mar-1	62	92	355	670	42	10	220.31			24			
Mar-2	60	92	350	670	42	10	220.31			24			
Mar-3	55	95	400	660	42	10	220.31			24			
Mar-4	50	92	320	660	42	10	220.31			24			
Mar-5	62	92	360	660	42	10	220.31			24			
Mar-6	62	92	310	660	42	10	220.31			24			
Mar-7	33	92	360	660	42	10	220.31			24			
Mar-8	56	92	340	655	77	6	231.06	1773.23	1773.23	24	Oneok comp down		
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Mar-9	61	92	340	655	77	6	231.06			24			
Mar-10	62	91	350	660	77	6	231.06			24			
Mar-11	58	92	350	650	77	6	231.06			24			
Mar-12	63	92	375	650	78	6	232.56			24			
Mar-13	62	92	395	650	78	6	232.56			24			
Mar-14	63	95	300	650	78	6	232.56			24			
Mar-15	62	95	350	650	79	6	234.04			24			
Mar-16	64	95	390	650	79	6	234.04	1858.95	3632.18	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Mar-17	59	93	350	650	80	6	235.52			24			
Mar-18	62	118	505	655	80	6	235.52			24			
Mar-19	62	92	270	645	80	6	235.52			24			
Mar-20	47	92	300	645	80	6	235.52			24			
Mar-21	60	92	300	640	80	6	235.52			24			
Mar-22	64	91	345	640	40	10	215.00			24			
Mar-23	66	92	330	640	80	6	235.52			24			
Mar-24	62	92	355	645	80	6	235.52	1863.64	5495.82	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Mar-25	55	91	355	640	40	10	215.00			24			
Mar-26	60	92	270	640	40	10	215.00			24			
Mar-27	62	90	355	640	40	10	215.00			24			
Mar-28	59	90	330	625	40	10	215.00			24			
Mar-29	65	90	350	630	40	10	215.00			24			
Mar-30	58	91	345	625	40	10	215.00			24			
Mar-31	63	90	340	620	40	10	215.00	1505.00	7000.82	24			
TOTAL GAS PRODUCED				7000.82		MCF avg	225.83						

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Vrath Production Services Inc.
509 N. Cedar
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tvrath@cyberlodg.com

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Z-Bar 9-5		API # 15-007-24068		Sec 9 Twp 34S Rge 14W				500#x100"x1.250					
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Jan-1							0.00						
Jan-2			1240	1240	40	10	89.58			10	turned to sales		
Jan-3	60	85	520	1048	45	15	279.29			24			
Jan-4	64	85	500	1005	43	14	263.76			24			
Jan-5	61	85	445	940	50	20	339.94			24			
Jan-6	64	87	370	880	50	25	380.07			24			
Jan-7	62	93	490	900	50	20	339.94			24			
Jan-8	63	95	450	900	50	18	322.50	2015.09	2015.09	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Jan-9	62	95	440	895	40	14	254.39			24			
Jan-10	62	95	450	880	40	15	263.32			24			
Jan-11	62	92	450	870	40	14	254.39			24			
Jan-12	64	93	425	855	40	14	254.39			24			
Jan-13	65	92	420	845	40	14	254.39			24			
Jan-14	90	90	440	840	40	14	254.39			24	chg oil dump		
Jan-15	56	92	450	830	40	15	263.32			24			
Jan-16	64	92	470	825	40	15	263.32	2061.92	4077.01	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Jan-17	63	96	400	820	40	14	254.39			24	12-1/2/64"		
Jan-18	64	92	445	805	40	14	254.39			24			
Jan-19	60	92	460	805	40	13	245.14			24			
Jan-20	65	92	475	800	40	13	245.14			24			
Jan-21	63	92	420	795	40	14	254.39			24			
Jan-22	62	92	420	790	40	13	245.14			24			
Jan-23	60	96	410	780	40	14	254.39			24			
Jan-24	63	90	410	770	40	13	245.14	1998.12	6075.13	24			
DATE	Wtr Line Press	Separator	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS		
Jan-25	62	90	350	760	40	14	254.39			24			
Jan-26	62	90	340	755	40	13	245.14			24			
Jan-27	61	92	400	750	40	14	254.39			24			
Jan-28	62	91	340	752	40	13	245.14			24			
Jan-29	64	90	410	750	40	13	245.14			24			
Jan-30	62	90	325	748	40	14	254.39			24			
Jan-31	62	92	300	740	40	14	254.39	1752.98	7828.11	24			
TOTAL GAS PRODUCED				7828.11		MCF avg	252.52						

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