

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
IS-007-23700-00-00

Company M & M Exploration, Inc.		Lease Z Bar		Well Number 9-14	
County Barber	Location SE/4 SW/4	Section 9	TWP 34S	RNG (E/W) 14W	Acres Attributed 160
Field Aetna Gas Area		Reservoir Mississippian		Gas Gathering Connection ONEOK	
Completion Date August 10, 2011		Plug Back Total Depth 4800		Packer Set at None	
Casing Size 4.5	Weight 10.5	Internal Diameter 4.052	Set at 4893	Perforations 4639	To 4704
Tubing Size 2.375	Weight 4.7	Internal Diameter 1.995	Set at 4639	Perforations None	To
Type Completion (Describe) Single (Gas)		Type Fluid Production Saltwater/Crude		Pump Unit or Traveling Plunger? Yes / No No	
Producing Thru (Annulus / Tubing) Tubing		% Carbon Dioxide 0.0933		% Nitrogen 3.7656	
Vertical Depth(H)		Pressure Taps		Gas Gravity - G _g .6497	
				(Meter Run) (Prover) Size	

Pressure Buildup: Shut in November 8 2011 at 5:00 pm (AM) (PM) Taken November 10 2011 at 9:00 am (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 Prover Pressure psig (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						1170	1184.4	1200	1214.4		
Flow											

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _o) (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 _t	Deviation Factor F _{dv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

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

Open Flow **Mcfd @ 14.65 psia** Deliverability **Mcfd @ 14.65 psia**

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DEC 08 2011

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 6th day of December **KCC WICHITA**

Witness (if any)

For Company

For Commission

Checked by

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 9-14 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: December 6, 2011

Signature: 

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.

MEASUREMENT SOLUTIONS INC.

6705 East 81st Street Suite 155 Tulsa, OK 74133
Telephone 918-493-2700 Fax 918-493-2704

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11/3/2011

GAS ANALYSIS REPORT

METER NUMBER :	999999	SAMPLE TYPE :	SPOT
METER NAME :	Z-BAR 9-14	SAMPLE DATE :	10/27/2011
METER ID :	M & M EXPLORATION	SAMPLE PRES / TEMP :	32 / 52
PRODUCER :		SAMPLED BY :	GM
COMPANY :	M & M EXPLORATION	EFFECTIVE DATE :	10/01/2011

<u>COMPONENT</u>		<u>PERCENT</u>	<u>BTU VALUES @ 14.65</u>		<u>BTU VALUES @ 14.73</u>	
Helium	He	0.1497	REAL DRY	1090.84	REAL DRY	1096.79
Oxygen	O2	0.0000	REAL WET	1071.75	REAL WET	1077.60
Hydrogen Sulfide	H2S	0.0000				
Carbon Dioxide	CO2	0.0933				
Nitrogen	N2	3.7656				
Methane	C1	85.8544	<u>GPM VALUES @ 14.65</u>		<u>GPM VALUES @ 14.73</u>	
Ethane	C2	6.2927	C2	1.6728	C2	1.6820
Propane	C3	2.4630	C3	0.6745	C3	0.6782
I-Butane	iC4	0.2494	iC4	0.0811	iC4	0.0816
N-Butane	nC4	0.6211	nC4	0.1947	nC4	0.1958
I-Pentane	iC5	0.1365	iC5	0.0497	iC5	0.0500
N-Pentane	nC5	0.1762	nC5	0.0635	nC5	0.0638
Hexane Plus	C6+	0.1981	C6+	0.0860	C6+	0.0864
TOTALS		100.0000		2.8223		2.8378

SPECIFIC GRAVITY

REAL DRY 0.6497
REAL WET 0.6493

COMPRESSIBILITY FACTOR

Z FACTOR DRY 0.9975
Z FACTOR WET 0.9975

GALLONS PER THOUSAND

GPM TOTALS @ 14.65
C2 + GPM 2.8223
C3 + PGM 1.1495
C4 + GPM 0.4750
C5 + GPM 0.1992

GPM TOTALS @ 14.73
C2 + GPM 2.8378
C3 + PGM 1.1558
C4 + GPM 0.4776
C5 + GPM 0.2002

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KCC WICHITA

COMMENTS :

DATE	TANK 132777	INCHES	DAILY PROD	WKLY OIL	PROD THIS MONTH	WTR GAUGE FT IN	INCHES	WTR PROD	WKLY WTR	TOTAL WTR	WTR HAULED	Tkt No	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS	
Oct-1			0.00					0.00										0.00				
Oct-2			0.00					0.00										0.00				
Oct-3			0.00					0.00										0.00				
Oct-4			0.00					0.00										0.00				
Oct-5			0.00					0.00										0.00				
Oct-6			0.00					0.00										0.00				
Oct-7			0.00					0.00										0.00				
Oct-8			0.00	0.00	0.00			0.00	0.00	0.00							0.00	0.00	0.00			
Oct-9			0.00					0.00										0.00				
Oct-10			0.00					0.00										0.00				
Oct-11			0.00					0.00										0.00				
Oct-12			0.00					0.00										0.00				
Oct-13			0.00					0.00										0.00				
Oct-14			0.00					0.00										0.00				
Oct-15			0.00					0.00										0.00				
Oct-16			0.00	0.00	0.00			0.00	0.00	0.00							0.00	0.00	0.00			
Oct-17			0.00					0.00										0.00				
Oct-18			0.00					0.00										0.00				
Oct-19			0.00					0.00										0.00				
Oct-20			0.00					0.00										0.00				
Oct-21			0.00					0.00										0.00				
Oct-22			0.00					0.00										0.00				
Oct-23			0.00					0.00										0.00				
Oct-24			0.00	0.00	0.00			0.00	0.00	0.00							0.00	0.00	0.00			
Oct-25			0.00					0.00										0.00				
Oct-26	turned to sales		0.00					0.00								60	0	0.00			12	
Oct-27			0.00					0.00								45	44	145.73			12	
Oct-28	0' 5"	5	8.35			0' 3"	3	5.01						580	1250	60	17	209.19			24	
Oct-29	1' 4"	11	18.37			10' 6" - 2' 4"	151	252.17				210 to 9-10		310	1090	35	17	159.77			24	inspect orifice, cal. Meter
Oct-30	1' 6 1/4"	2.25	3.76			9' 3" - 1' 9"	83	138.61				80 to 9-10		400	1050	40	13	149.36			24	
Oct-31	1' 9"	2.75	4.59	35.07	35.07	9' 6 1/2" - 2' 7 1/2"	118.5	197.90	593.69	593.69		180 to 9-10		440	1030	37	13	143.65	807.71	807.71	24	
TOTAL GAS PRODUCED			807.71			MCF avg		134.62														
TOTAL OIL PRODUCED			35.07			BOPD avg		5.85														
TOTAL OIL SOLD																						
TOTAL WTR PRODUCED			593.69			BWPD avg		98.95														
Date	Ticket No	Tank No	From																			

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 DEC 08 2011
 KCG WICHTA

DATE	TANK 132777	INCHES	DAILY PROD	WKLY OIL	PROD THIS MONTH	WTR GAUGE FT IN	INCHES	WTR. PROD	WKLY WTR	TOTAL WTR	WTR HAULED Tkt No	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS	
Nov-1	2' 1/4"		3.25	5.43		8' 2 1/2" - 1' 3"	30.25	50.52			150 to CCSWD	430	1010	37	13	143.65			24		
Nov-2	2' 6 1/2"		6.25	10.44		11' 9" - 0' 4"	145	242.15			260 to CCSWD	330	895	40	19	180.57			24		
Nov-3	2' 9 1/2"		3	5.01		9' 1 1/2" - 4' 7 1/2"	105.5	176.19			90 to CCSWD	348	860	40	18	175.75			24		
Nov-4	3' 1 1/4"		3.75	6.26		9' 8" - 3' 7 1/2"	111.5	186.21			206 to CCSWD	320	840	40	18	175.75			24		
Nov-5	3' 5 3/4"		4.5	7.52		9' 3 1/2" - 1' 3"	77	128.59			176 to CCSWD	330	810	40	19	180.57			24		
Nov-6	3' 8"		2.25	3.76		7' 10" - 0' 4"	83	138.61			157 to CCSWD	500	810	35	5	86.65			24		
Nov-7	3' 9 1/4"		1.25	2.09		1' 6 1/2"	14.5	24.22				1020	1000	40	5	92.63			24		
Nov-8	4' 1 1/2"		4.25	7.10	47.60	47.60	8' 9 1/2"	87	145.29	1091.76	1091.76	300	805	37	19	115.78	1151.36	1151.36	16		
Nov-9	4' 2 1/4"		0.75	1.25		10' 8"	22.5	37.58				1100	1070	33	0	0.00			24		
Nov-10	4' 2 1/4"		0.00					0.00						35	0	0.00			24		
Nov-11	4' 2 1/4"		0.00			10' 9" - 2' 10"	1	1.67			160 to CCSWD	1200	1170	55	35	131.72			11		
Nov-12	4' 2 1/4"		0.00			2' 10"		0.00				1120	1090	45	25	164.77			18	Oneok down, froze up	
Nov-13	4' 6"		3.75	6.26		12' 10" - 1' 11"	133	222.11			240 to CCSWD	245	810	40	16	165.70			24		
Nov-14	4' 9 1/2"		3.5	5.85		10' 10" - 2' 4"	107	178.69			170 to CCSWD	230	720	40	16.5	168.27			24		
Nov-15	5' 1/2"		3	5.01		12' 1" - 7' 7"	122.5	204.58			170 to CCSWD	220	660	40	14	155.00			24		
Nov-16	5' 2 1/2"		2	3.34	21.71	69.31	8' 4" - 0' 4"	13	21.71	666.33	1758.09	167 to CCSWD	270	670	35	11.5	131.41	916.87	2068.23	24	
Nov-17	5' 4 1/4"		1.75	2.92		5' 10" - 1' 4"	66	110.22			90 to CCSWD	345	745	40	8	117.17			24		
Nov-18	5' 5 1/2"		1.25	2.09		4' 9" - 0' 4"	41	68.47			89 to CCSWD	330	880	40	7	109.60			24		
Nov-19	5' 7 1/2"		2	3.34		4' 10" - 0' 10"	42	70.14			80 to CCSWD	325	785	40	8	117.17			24		
Nov-20	5' 10 1/2"		3	5.01		6' 9 1/2" - 2' 3 1/2"	71.5	119.41			90 to CCSWD	350	750	40	13	149.36			24		
Nov-21	6' 1 1/4"		2.75	4.59		10' 8 1/2" - 1' 11 1/2"	104	173.68			180 to CCSWD	200	645	40	12	143.50			24		
Nov-22	6' 4 1/2"		3.25	5.43		8' 8" - 1' 3"	85.5	142.79			157 to CCSWD	200	580	40	14	155.00			24		
Nov-23	6' 8 1/2"		4	6.68		9' 7" - 1' 3"	103.5	172.85			173 to CCSWD	130	548	40	13	149.36			24		
Nov-24	6' 10 1/2"		2	3.34	33.40	102.71	7' 9" - 3' 3"	78	130.26	987.81	2745.90	90 to CCSWD	170	540	40	12	143.50	1084.68	3152.91	24	
Nov-25	7' 2 1/4"		3.75	6.26		10' 4" - 1' 8"	89	148.63			180 to CCSWD	90	510	35	12	134.24			24		
Nov-26	7' 4 1/2"		2.25	3.76		7' 9"	73	121.91				130	510	35	13	69.86			12	Sl too muddy to get SW hauled	
Nov-27	7' 4 1/2"		0.00					0.00						35	0	0.00			24		
Nov-28	7' 4 1/2"		0.00			7' 9" - 1' 3"		0.00			130 to CCSWD	990	960	35	50	114.17			10	turned well on, 11/64"	
Nov-29	7' 4 1/2"		0.00			1' 4 1/2"	1.5	2.51				850	850	40	36	124.28			12	20/64"	
Nov-30	7' 7 3/4"		2.25	3.76		11' 9 1/2" - 1' 3"	133.5	222.95			225 to CCSWD	160	535	40	29	223.08			24	21/64"	
				13.78	116.48					495.99	3241.89					665.62	3818.54				
TOTAL GAS PRODUCED			3818.54	MCF avg		127.28															
TOTAL OIL PRODUCED			116.48	BOPD avg		3.88															
TOTAL OIL SOLD																					
TOTAL WTR PRODUCED			3241.89	BWPD avg		108.06															

Date Ticket No Tank No From To Gross Bbls RECEIVED Gvty Temp % BSW

RECEIVED
 DEC 08 2011
 KCC WICHITA