

# 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  
007202080001

Company <b>M &amp; M Exploration, Inc.</b>		Lease <b>Davis Ranch</b>		Well Number <b>1-22</b>	
County <b>Barber</b>	Location <b>2569' FNL, 1909' FWL</b>	Section <b>22</b>	TWP <b>34</b>	RNG (E/W) <b>15W</b>	Acres Attributed <b>160</b>
Field <b>Aetna</b>		Reservoir <b>Mississippian</b>		Gas Gathering Connection <b>ONEOK</b>	
Completion Date <b>10/11/2012</b>		Plug Back Total Depth <b>4934'</b>		Packer Set at <b>None</b>	
Casing Size <b>4.5</b>	Weight <b>10.5</b>	Internal Diameter <b>4.052</b>	Set at <b>4960'</b>	Perforations <b>4746'</b>	To <b>4785'</b>
Tubing Size <b>2.375</b>	Weight <b>4.7</b>	Internal Diameter <b>1.995</b>	Set at <b>4740'</b>	Perforations	To
Type Completion (Describe) <b>Single (Gas)</b>		Type Fluid Production <b>Saltwater/Crude</b>		Pump Unit or Traveling Plunger? Yes / No <b>Traveling Plunger</b>	
Producing Thru (Annulus / Tubing) <b>Tubing</b>		% Carbon Dioxide <b>0.0877</b>		% Nitrogen <b>2.8026</b>	
Vertical Depth(H)		Pressure Taps		Gas Gravity - G <sub>g</sub> <b>0.6468</b>	
Pressure Buildup: Shut in <b>February 5</b> 20 <b>13</b> at <b>9:00</b> (AM) (PM)		Taken <b>February 7</b> 20 <b>13</b> at <b>8:00</b> (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 <sub>2</sub> O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						685	699.4	662	674.4		
Flow											

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>c</sub> ) (F <sub>p</sub> ) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F <sub>g</sub>	Flowing Temperature Factor F <sub>t</sub>	Deviation Factor F <sub>dv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>s</sub>)<sup>2</sup> = 0.207

(P<sub>o</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> = _____	(P <sub>w</sub> ) <sup>2</sup> = _____	P <sub>o</sub> = _____ %	(P <sub>c</sub> - 14.4) + 14.4 = _____				
(P <sub>c</sub> ) <sup>2</sup> - (P <sub>o</sub> ) <sup>2</sup> or (P <sub>o</sub> ) <sup>2</sup> - (P <sub>o</sub> ) <sup>2</sup>	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>c</sub> <sup>2</sup> - P <sub>o</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> divided by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1. or 2. and divide by $P_c^2 - P_w^2$	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

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 15th day of March, 20 13.

Witness (if any)

For Company

For Commission

Checked by

*[Signature]*

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KCC WICHITA

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 Davis Ranch 1-22 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: March 15, 2013

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.

Davis 1-22 OWWO		API # 15-007-20208		Sec 22 Twp 34S Rge 15W								250#x100"x1.000			New Jan 2013	
DATE	Oil GAUGE FT IN	INCHES	Oil PROD	WKLY Oil	TOTAL Oil	WTR HAULED	Tkt No	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS
Feb-1	3' 9 1/4"	1.5	2.51					50	420	28	4	69.32			24	26/64"
Feb-2	3' 9"	-0.25	-0.42					42	475	26	4	66.80			24	
Feb-3	3' 9"		0.00					58	470	25	20	24.41			4	
Feb-4	3' 9"		0.00							25	20	18.31			3	
Feb-5	3' 10 1/2"	1.5	2.51							27	50	40.11			4	SI working on well
Feb-6	3' 11 1/2"	1	1.67					662	685	26	0	0.00			0	
Feb-7	4' 0"	0.5	0.84						478	85	50	26.69			1.5	switched pipelines, turned plunger on
Feb-8	4' 0"		0.00	7.10	7.10				478	85	50	53.38	299.01	299.01	3	
Feb-9	4' 0"		0.00					510	480	85	50	71.17			4	
Feb-10	4' 1/2"	0.5	0.84					100	480	85	50	53.38			3	
Feb-11	4' 1"	0.5	0.84					100	470	90	50	73.23			4	
Feb-12	4' 1 1/2"	0.5	0.84					100	465	90	50	73.23			4	
Feb-13	4' 2"	0.5	0.84					100	460	87	50	45.00			2.5	
Feb-14	4' 2 1/2"	0.5	0.84					100	450	87	50	45.00			2.5	
Feb-15	4' 3"	0.5	0.84					100	442	90	50	36.62			2	
Feb-16	4' 3 1/2"	0.5	0.84	5.85	12.94			125	460	87	50	45.00	442.62	741.63	2.5	
Feb-17	4' 4"	0.5	0.84					120	460	87	50	45.00			2.5	
Feb-18	4' 4 3/4"	0.75	1.25					100	449	87	50	45.00			2.5	
Feb-19	4' 5 1/2"	0.75	1.25					225	480	87	50	45.00			2.5	
Feb-20	4' 7"	1.5	2.51					100	440	88	50	45.26			2.5	
Feb-21	4' 8 1/2"	1.5	2.51					80	430	87	50	45.00			2.5	
Feb-22	4' 10"	1.5	2.51					80	430	85	50	44.48			2.5	
Feb-23	5' 0"	2	3.34					80	425	75	50	41.78			2.5	
Feb-24	5' 1"	1	1.67	15.87	28.81			60	425	70	50	40.36	351.89	1093.52	2.5	SI snowstorm
Feb-25	5' 1"		0.00							30	50	26.43			2.5	
Feb-26			0.00							30	50	26.43			2.5	
Feb-27			0.00							25	50	24.12			2.5	
Feb-28	5' 1"		0.00							25	50	24.12			2.5	
				0.00	28.81					101.10	1194.61					
<b>TOTAL GAS</b>		<b>1194.61</b>	<b>MCF avg</b>	<b>42.66</b>												
<b>Total Oil Prod</b>		<b>28.81</b>	<b>BOPD avg</b>	<b>1.03</b>												
Wtr goes to Davis 3-22																

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Davis 1-22 OWWO		API # 15-007-20208		Sec 22 Twp 34S Rge 15W										260"x100"x1.000		New Jan 2013	
DATE	WTR GAUGE FT IN	WTR INCHES	WTR PROD	WKLY WTR	TOTAL WTR	WTR HAULED	Tkt No	TBG	CSG	LP	DIFF	MCF	WKLY GAS	TOTAL GAS MO.	HRS. ON	REMARKS	
Jan-1	frac tank readings																
Jan-2	4' 4" - 0' 2"			0.00		264		1460	1460	75	42	306.35			20	Turned to sales	
Jan-3	2' 7"			0.00				418	800	60	25	253.68			24	21/64"	
Jan-4	4' 5 1/2" - 1' 6 1/2"			108.88		180		360	740	68	18	229.16			24		
Jan-5	3' 2"			125.64				340	680	69	15	210.72			24		
Jan-6	4' 7"			85.63				340	660	66	10	168.27			24		
Jan-7	6' 2" - 1' 10 1/2"			98.34		210		200	540	77	9	172.43			24	22/64"	
Jan-8	3' 2 1/2"			74.17	492.66	492.66		185	500	77	8	162.57	1796.09	1796.09	24		
Jan-9	4' 5" - 1' 2"			75.56		180		150	475	77	7	152.07			24		
Jan-10	2' 5"			68.08				142	465	77	6	140.79			24		
Jan-11	3' 7"			67.59				140	455	75	6	138.95			24		
Jan-12	4' 7"			60.44				122	450	75	6	138.95			24		
Jan-13	5' 6"			55.41				138	455	73	5	125.14			24		
Jan-14	6' 5" - 1' 11"			55.41		270		142	440	73	5	125.14			24		
Jan-15	2' 3" - 1' 1"			36.31		65		120	430	73	4	111.93			24		
Jan-16	2' 2"			45.39	464.19	956.85		118	430	75	3	98.25	1031.20	2827.29	24		
Jan-17	2' 10" - 1' 3 1/2" 1' 3 1/2" - 0' 0"			0.00		80 to 16-4		0	460	76	3	49.45			12	setting tank	
Jan-18	2' 11"			0.00				730	730	78	5	64.68			24	58 bbl oil from frac to stock	
Jan-19	2' 10 3/4"			0.00				100	490	78	5	129.35			24	12 plumb in heater treater, turned back on	
Jan-20	2' 10 3/4"			0.00				80	450	78	5	129.35			24		
Jan-21	2' 10 3/4"			0.00				75	420	77	6	140.79			24		
Jan-22	2' 10 3/4"			0.00				75	420	77	5	128.52			24		
Jan-23	3' 0"	1.25	2.09					110	420	77	5	128.52			24		
Jan-24	3' 3/4"	0.75	1.25	61.50	61.50			80	430	79	4	116.44	887.09	3714.38	24		
Jan-25	3' 1 1/4"	0.5	0.84					60	440	78	3	100.20			24	oil sight glass broke	
Jan-26	3' 1 1/4"		0.00					70	445	80	3	101.47			24		
Jan-27	3' 3 3/4"	2.5	4.18					63	430	78	4	115.70			24		
Jan-28	3' 5"	1.25	2.09					62	425	78	4	115.70			24		
Jan-29	3' 5 1/2"	0.5	0.84					45	420	28	13	124.97			24	switched pipelines	
Jan-30	3' 6 1/4"	0.75	1.25					47	415	28	13	124.97			24		
Jan-31	3' 7 3/4"	1.5	2.51	11.69	73.19			42	430	28	10	109.60	792.59	4506.98	24		
<b>TOTAL GAS</b>		<b>4525.52</b>	<b>MCF avg</b>	<b>146</b>													
<b>Total Oil Prod</b>		<b>73.00</b>	<b>BOPD avg</b>	<b>5.21</b>													
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