

# KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
June 18, 2014

API No. 15  
15-035-22,204-000

Company Cowley Energy Associates, LLC		Lease McCollum		Well Number #4 well	
County Cowley	Location E/2 NW/4 NE/4	Section 13	TWP 33S	RNG (E/W) 4E	Acres Attributed
Field Winfield		Reservoir Admire		Gas Gathering Connection Cowley Gas Systems, LLC	
Completion Date 4/23/1979		Plug Back Total Depth 629'		Packer Set at N/A	
Casing Size 4 1/2"	Weight Unknown	Internal Diameter	Set at 629'	Perforations 617'	To 619'
Tubing Size N/A	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) Single (gas)		Type Fluid Production N/A		Pump Unit or Traveling Plunger? Yes / No NO	
Producing Thru (Annulus / Tubing)		% Carbon Dioxide		% Nitrogen	
Casing				Gas Gravity - G <sub>g</sub>	
Vertical Depth(H)		Pressure Taps		(Meter Run) (Prover) Size	
Pressure Buildup: Shut in June 17 20 14 at 11:00 AM (AM) (PM) Taken June 18 20 14 at 5:00 PM (AM) (PM)					
Well on Line: Started _____ 20 ____ at _____ (AM) (PM) Taken _____ 20 ____ at _____ (AM) (PM)					

### OBSERVED SURFACE DATA

Duration of Shut-in 30 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>1</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						4#					0
Flow											

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>b</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>tt</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>

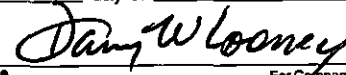
### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>o</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>o</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>o</sub>)<sup>2</sup> = 0.207  
(P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>o</sub> ) <sup>2</sup> - (P <sub>2</sub> ) <sup>2</sup> or (P <sub>o</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>o</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>o</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> 2. P <sub>o</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> divided by: P <sub>o</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1, or 2, and divide by: $\frac{P_o^2 - P_w^2}{P_o^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- 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 21st day of July, 20 14.

  
**KCC WICHITA**  
 For Company  
**JUL 22 2014**  
 RECEIVED

**KCC WICHITA**  
 For Commission  
**AUG 07 2014**  
 RECEIVED

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 Cowley Energy Associates, LLC 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 McCollum #4 well 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: ~~July 21, 2014~~ \_\_\_\_\_

*August 4, 2014*

Signature: *Danny W Looney*

Title: Manager

**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.

KCC WICHITA

KCC WICHITA

AUG 07 2014

JUL 22 2014

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