

SIP Test

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

Type Test:

(See Instructions on Reverse Side)

- Open Flow  
 Deliverability

Test Date:  
6-12-17

API No. 15  
15-119-20,373 - 0000

Company COTTRELL GAS LLC		Lease COTTRELL			Well Number 1-21	
County MEAD	Location S/2 S/2 SW	Section 21	TWP 32S	RNG (E/W) 29W	Acres Attributed	
Field		Reservoir MORROW		Gas Gathering Connection		
Completion Date 4-6-80		Plug Back Total Depth 5687		Packer Set at NONE		
Casing Size 4.5	Weight 10.5	Internal Diameter 4.090	Set at 5739	Perforations 5622-5637	To 5220-5228	
Tubing Size	Weight	Internal Diameter	Set at	Perforations	To	
Type Completion (Describe) GAS		Type Fluid Production NONE		Pump Unit or Traveling Plunger? Yes / No NO		
Producing Thru (Annulus / Tubing) ANNULUS		% Carbon Dioxide		% Nitrogen		Gas Gravity - G <sub>g</sub>
Vertical Depth(H) 5637		Pressure Taps			(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-10-17 20 at 0900 (AM) (PM) Taken 6-12-17 20 at 0900 (AM) (PM)						
Well on Line: Started _____ 20 at _____ (AM) (PM) Taken _____ 20 at _____ (AM) (PM)						

### OBSERVED SURFACE DATA

Duration of Shut-in 48.0 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter Prover Pressure psig (P <sub>m</sub> )	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						166.3	180.7			48.0	
Flow											

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>p</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 F <sub>11</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>c</sub>)<sup>2</sup> = \_\_\_\_\_ ; (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ ; P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>a</sub>)<sup>2</sup> = 0.207 ; (P<sub>o</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>a</sub> ) <sup>2</sup> or (P <sub>c</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>a</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> - P <sub>o</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: $\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG $\left[ \frac{P_c^2 - P_a^2}{P_c^2 - P_w^2} \right]$	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, hereby 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 12 day of JUNE, 2017

KANSAS CORPORATION COMMISSION

WICHITA, KS

JUN 19 2017

Precision Wellbore & Testing  
For Company  
Checked by: Matt Beal  
620-629-0204

Copy to KCC Wichita  
Witness (if any)

For Commission

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 Cottrell Gas 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 COTTRELL 1-21 gas well on the grounds that said well:

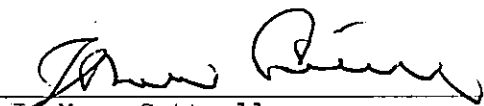
(Check one)

- 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: 6-17-2017

Signature: \_\_\_\_\_

  
J. Marc Cottrell  
Member of LLC

Title: \_\_\_\_\_

**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.