

KANSAS CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow
 Deliverability

Test Date:
9/30/2015

API No. 15
15-113-20,438-0000

Company D & R Well Service, Inc.		Lease Nightingale		Well Number 1	
County McPherson	Location NE SW SE	Section 13	TWP 20S	RNG (E/W) 02W	Acres Attributed
Field Ritz Canton		Reservoir Mississippi	Gas Gathering Connection American Energies Pipeline		
Completion Date 6-3-1977		Plug Back Total Depth 3025	Packer Set at None		
Casing Size 5 1/2	Weight 15#	Internal Diameter 4.974	Set at 3429	Perforations 2930	To 2984
Tubing Size 2 3/8	Weight 4.7#	Internal Diameter 1.995	Set at 3018	Perforations 3002	To 3005
Type Completion (Describe) Single		Type Fluid Production Salt Water	Pump Unit or Traveling Plunger? Yes / No Pumping Unit		
Producing Thru (Annulus / Tubing) Tubing Annulus		% Carbon Dioxide .1029	% Nitrogen 6.3029	Gas Gravity - G _g .6795	
Vertical Depth(H) 3022 Plugged back from 3430		Pressure Taps Flange		(Meter Run) (Prover) Size Meter run 2"	
Pressure Buildup: Shut in <u>9/30</u> 20 <u>15</u> at <u>8:45 am</u> (AM) (PM) Taken <u>10/1</u> 20 <u>15</u> at <u>9:00 am</u> (AM) (PM)					
Well on Line: Started <u>10/1</u> 20 <u>15</u> at <u>9:00 am</u> (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 _e)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _e)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In	.250	Meter				78#	93#	77#	92#	24 hours	10
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 _t	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_e)² = 0.207

(P_d)² = _____

(P_e)² = _____ : (P_w)² = _____ : P_d = _____ % (P_e - 14.4) + 14.4 = _____ :

(P _e) ² - (P _s) ² or (P _e) ² - (P _d) ²	(P _e) ² - (P _w) ²	Choose formula 1 or 2: 1. P _e ² - P _a ² 2. P _e ² - P _d ² divided by: P _e ² - P _w ²	LOG of formula 1. or 2. and divide by: $\frac{P_e^2 - P_w^2}{P_e^2 - P_d^2}$	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 _____ Deliverability Mcfd @ 14.65 psia **6 mcfd**

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 1 day of October, 20 15.

Received _____
KANSAS CORPORATION COMMISSION
For Commission For Company
Douglas Ward
Checked by

OCT 15 2015

CONSERVATION DIVISION
WICHITA, KS

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 D & R Well Service, 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 Nightingale 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: 10/5/2015

Received
KANSAS CORPORATION COMMISSION

OCT 15 2015

CONSERVATION DIVISION
WICHITA, KS

Signature: Douglas Ward

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.