

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

- Open Flow
 Deliverability

Test Date: 1-31-2011

API No. 15 155-20,614-00-00

Company Vamco Operations		Lease Harley			Well Number 1
County Reno	Location C SE NW	Section 7	TWP 23	RNG (E-W) 9 W	Acres Attributed 80
Field Huntsville		Reservoir MISS	Gas Gathering Connection West Wichita Gas		
Completion Date 10-25-1979		Plug Back Total Depth 3695	Packer Set at		
Casing Size 4.5	Weight 10#	Internal Diameter 4.5	Set at 3685	Perforations 3584 3596	To
Tubing Size 2.375	Weight 4.7	Internal Diameter 2.	Set at 3600'	Perforations	To
Type Completion (Describe) Single Gas		Type Fluid Production Gas & Water	Pump Unit or Traveling Plunger? Yes / No no		
Producing Thru (Annulus / Tubing) Tubing		% Carbon Dioxide	% Nitrogen	Gas Gravity - G _g	
Vertical Depth(H)		Pressure Taps		(Meter Run) (Prover) Size	

Pressure Buildup: Shut in **Jan 1** 20 **11** at **8:00** **(AM)** (PM) Taken **Jan 30** 20 **11** at **8:00** **(AM)** (PM)

Well on Line: Started _____ 20 at _____ (AM) (PM) Taken _____ 20 at _____ (AM) (PM)

OBSERVED SURFACE DATA								Duration of Shut-in 24 Hours			
Static / Dynamic Property	Orifice Size (Inches)	Circle or 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 ₁) or (P _c)		Tubing Wellhead Pressure (P _w) or (P ₁) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In	.500				50	320#		320#		24	none
Flow											

Plate Coefficient (F _p) (F _p) Mcfd	Circle or Meter or Prover Pressure psia	Press Extension $\sqrt{P_w \times h}$	Gravity Factor F _g	Flowing Temperature Factor F _t	Deviation Factor F _d	Metered Flow R (Mcfd)	GOR (Cubic Feet Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(P _c) ² - (P _w) ² or (P _c) ² - (P _w) ²	(P _w) ² - (P _w) ²	Choose formula 1 or 2 1. P _c ² - P _w ² 2. P _c ² - P _w ² divided by P _c ² - P _w ²	LOG of formula 1 or 2 and divide by	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	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 30 day of January, 20 12.

RECEIVED Vamco Operations

MAR 02 2012

Witness (if any) _____ For Commission For Company Checked by _____

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 Vamco Operations 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 Harley #1 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: 12-30-2012

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KCC WICHITA

Signature: John Thomas
Title: Owner

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.