

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow
 Deliverability

Test Date:
7/28/2013

API No. 15
15-171-20185-00-00

Company HERMAN L. LOEB LLC		Lease BARNHARDT		Well Number 2-1	
County SCOTT	Location C SE	Section 2	TWP 20S	RNG (E/W) 33W	Acres Attributed
Field HUGOTON N. EXT.		Reservoir KRIDER	Gas Gathering Connection ONEOK FIELD SVCS.		
Completion Date 1980		Plug Back Total Depth 2653	Packer Set at NONE		
Casing Size 4.500	Weight 9.5	Internal Diameter 4.090	Set at 2681	Perforations 2641	To 2645
Tubing Size 2.375	Weight 4.7	Internal Diameter 1.995	Set at 2626	Perforations OPEN	To
Type Completion (Describe) SINGLE		Type Fluid Production GAS, WATER	Pump Unit or Traveling Plunger? Yes / No PUMPING		
Producing Thru (Annulus / Tubing) ANNULUS		% Carbon Dioxide	% Nitrogen	Gas Gravity - G _g	
Vertical Depth(H) 2645		Pressure Taps		(Meter Run) (Prover) Size	
Pressure Buildup: Shut in <u>7/28</u> 20 <u>13</u> at _____ (AM) (PM) Taken <u>7/29</u> 20 <u>13</u> at _____ (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 ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P _t) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _t) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						82				24	
Flow											

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (F _o) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F _g	Flowing Temperature Factor F _{tt}	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(P _c) ² - (P _a) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _a ² 2. P _c ² - P _d ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG $\left[\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2} \right]$	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, 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 8TH day of AUGUST, 20 13.

Witness (if any)

For Company

RECEIVED
KANSAS CORPORATION COMMISSION

For Commission

Checked by

AUG 14 2013

CONSERVATION DIVISION
WICHITA, KS