

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow
- Deliverability

Test Date:
2/15 to 2/16/11

API No. 15
145-21,594-00-00

Company F.G.Holl		Lease Nuss		Well Number 1-12	
County Pawnee	Location 10'E&203'SofCSESESE	Section 12	TWP 21S	RNG (E/W) 16W	Acres Attributed
Field		Reservoir Arbuckle		Gas Gathering Connection SemGas	
Completion Date 10/20/09		Plug Back Total Depth 3958		Packer Set at none	
Casing Size 5.5	Weight	Internal Diameter	Set at 3973	Perforations 3788	To 3794
Tubing Size 2.875	Weight	Internal Diameter	Set at 3788	Perforations	To
Type Completion (Describe) sungle		Type Fluid Production SW		Pump Unit or Traveling Plunger? Yes / No no	
Producing Thru (Annulus / Tubing) tubing		% Carbon Dioxide .0000		% Nitrogen 5.8861	
Vertical Depth(H)		Pressure Taps flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in <u>02/11</u> 20 <u>11</u> at <u>10:00 am</u> (AM) (PM) Taken <u>02/14</u> 20 <u>11</u> at <u>10:00 am</u> (AM) (PM)					
Well on Line: Started <u>02/15</u> 20 <u>11</u> at <u>3:00 pm</u> (AM) (PM) Taken <u>02/16</u> 20 <u>11</u> at <u>3:00 pm</u> (AM) (PM)					

OBSERVED SURFACE DATA

Duration of Shut-in 72 Hours

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter or 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 _c)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						1094	1108.4	741	755.4	72	
Flow	.875	160	25.9	82		1037	1051.4	726	740.4	24	

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _o) (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 _{tt}	Deviation Factor F _{pr}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
3.824	174.4	67.21	1.253	.9795	1.013	320		.637

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 1228.550 : (P_w)² = 1105.441 : P_d = _____ % (P_c - 14.4) + 14.4 = _____ : (P_a)² = 0.207 (P_o)² = _____

(P _c) ² - (P _w) 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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
1228.343	123.109	9.977	.9989	.884	.8830	7.64	

Open Flow **2444** Mcfd @ 14.65 psia X .50 = Deliverability **1222** 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 28th day of February, 20 11.

Witness (if any)

For Commission

[Signature]
For Company
CCM, INC.

Checked by

RECEIVED
MAR 04 2011
KCC WICHITA