

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

- Open Flow
- Deliverability

Test Date: 3/05 to 3/06/12

API No. 15
145-21,578-00-00

Company F.G. Holl		Lease Ward B		Well Number 2-30	
County Pawnee	Location SWSWNE	Section 30	TWP 21S	RNG (E/W) 15W	Acres Attributed
Field JAC		Reservoir Arbuckle		Gas Gathering Connection SemGas	
Completion Date 11/3/08		Plug Back Total Depth 4050		Packer Set at none	
Casing Size 5.5	Weight	Internal Diameter	Set at 4042	Perforations 3870	To 3894
Tubing Size 2.875	Weight	Internal Diameter	Set at 3978	Perforations	To
Type Completion (Describe) single		Type Fluid Production SW		Pump Unit or Traveling Plunger? Yes / No no	
Producing Thru (Annulus / Tubing) tubing		% Carbon Dioxide .4170		% Nitrogen 7.155	
Gas Gravity - G _g .640		Vertical Depth(H)		Pressure Taps flange	
(Meter Run) (Prover) Size 2"		Pressure Buildup: Shut in 3/02 20 12 at 3:00 pm (AM) (PM) Taken 3/05 20 12 at 3:00 pm (AM) (PM)		Well on Line: Started 3/05 20 12 at 3:00 pm (AM) (PM) Taken 3/06 20 12 at 3:00 pm (AM) (PM)	

OBSERVED SURFACE DATA

Duration of Shut-in **72** Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter Prover Pressure psig (P _m)	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						1160	1174.4	1160	1174.4	72	
Flow	.750	148.8	11.3	85		780	794.4	400	414.4	24	15.03

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (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 _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
2.779	162.8	42.89	1.250	.9768	1.012	147		.640

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 1379.215 ; (P_w)² = 631.071 ; 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	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
1379.008	748.144	1.843	.2655	.681	.1808	1.52	224

Open Flow **224** Mcfd @ 14.65 psia X .50 = Deliverability **112** 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 19th day of June, 20 12.

Witness (if any)

For Commission

Gary E. ...

For Company
Checked by

RECEIVED
JUN 27 2012
KCC WICHITA