

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

Test Date:
11/06 to 11/07/15

API No. 15
009-25932-00-00

Company FG Holl Company, LLC			Lease Smith D		Well Number 1-30
County Barton	Location SESWNE	Section 30	TWP 20S	RNG (E/W) 15W	Acres Attributed
Field Pawnee Rock		Reservoir Arbuckle		Gas Gathering Connection IACX	
Completion Date 3/07/14		Plug Back Total Depth		Packer Set at none	
Casing Size 5.5	Weight	Internal Diameter	Set at 3996	Perforations 3850	To 3853
Tubing Size 2.875	Weight	Internal Diameter	Set at 3959	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 .4386		% Nitrogen 5.8442	Gas Gravity - G _g .639
Vertical Depth(H)		Pressure Taps flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 11/03 20 15 at 9:00 am (AM) (PM) Taken 11/06 20 15 at 9:00 am (AM) (PM)					
Well on Line: Started 11/06 20 15 at 9:00 am (AM) (PM) Taken 11/07 20 15 at 9:00 am (AM) (PM)					

OBSERVED SURFACE DATA

Duration of Shut-in 72 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or 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 _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						1162	1176.4			72	
Flow	.750	171	11	62		1057	1071.4			24	

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
2.779	185.4	45.15	1,251	.9981	1.015	159		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 1383.916 : (P_w)² = 1147.897 : P_d = _____ % (P_c - 14.4) + 14.4 = _____ : (P_d)² = 0.207
(P_d)² = _____

(P _c) ² - (P _s) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _d 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: $P_c^2 - P_w^2$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
1383.709	236.019	5.862	.7680	.747	.5736	3.74	594

Open Flow **594** Mcfd @ 14.65 psia X .50 = Deliverability **297** 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 20th day of November, 2015.

Witness (if any)

For Commission

For Company

 Checked by

Received
KANSAS CORPORATION COMMISSION

DEC 07 2015
CONSERVATION DIVISION
WICHITA, KS