

KANSAS CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow
 Deliverability

Test Date:
10/10/14

API No. 15
15-067-21795-00-00

Company LINN Operating, Inc. <i>Correction</i>		Lease Hohner B		Well Number 4 ATU-391	
County Grant	Location <i>SE SE SE SE SE</i>	Section 23	TWP 27S	RNG (E/W) 38 W	Acres Attributed 640
Field Hugoton-Panoma		Reservoir Chase & Council Grove		Gas Gathering Connection Jayhawk Gas Plant	
Completion Date 9/3/14		Plug Back Total Depth NA		Packer Set at NA	
Casing Size 5.5	Weight 15.5	Internal Diameter 4.95	Set at 730	Perforations 2372	To 2753
Tubing Size NA	Weight NA	Internal Diameter NA	Set at NA	Perforations NA	To NA
Type Completion (Describe) Single		Type Fluid Production Dry Gas		Pump Unit or Traveling Plunger? Yes / No NO	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide .061		% Nitrogen 13.529	
Vertical Depth(H) Flange		Pressure Taps Flange		(Meter Run) (Prover) Size 3.068	
Pressure Buildup: Shut in 10/10		20 14 at 11:00 AM (AM) (PM)		Taken 10/13 20 14 at 11:00 AM (AM) (PM)	
Well on Line: Started 10/13		20 14 at 11:00 AM (AM) (PM)		Taken 10/14 20 14 at 11:00 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 (Pm)	Pressure Differential in inches H ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P _c) or (P _e)		Tubing Wellhead Pressure (P _w) or (P _c) or (P _e)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in	1.000	13.8	0	62	62	13.8	28.2	NA	NA	72	0
Flow	1.000	11.9	37.2	62	62	11.9	26.3	NA	NA	24	0

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
4.912	26.3	31.279	1.180	.9985	1	181.042	0	0

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_e)² = .7952 ; (P_w)² = .6917 ; P_e = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_w)² = 0.207 ; (P_e)² = _____

(P _e) ² - (P _w) ² or (P _c) ² - (P _d) ²	(P _e) ² - (P _w) ²	Choose formula 1 or 2: 1. P _e ² - P _w 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: $\frac{P_e^2 - P_w^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
.5882	.1036	5.5807	.7544	.850	.6412	4.3777	729.5417

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 17th day of October, 2014.

Witness (if any)

Shawn Hildreth *Shawn Hildreth*

For Company

For Commission

Checked by