

KANSAS CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow
 Deliverability

Test Date:
7/11/2014

API No. 15
15-067-21780-00-00

Company LINN Operating, Inc.		Lease Brassfield		Well Number 5 ATU 132	
County Grant	Location NW NW NW NW	Section 34	TWP 29S	RNG (E/W) 38W	Acres Attributed 640
Field Hugoton-Panoma		Reservoir Chase & Council Grove		Gas Gathering Connection Jayhawk Gas Plant	
Completion Date 5/22/14		Plug Back Total Depth NA		Packer Set at NA	
Casing Size 5.5	Weight 15.5	Internal Diameter 4.95	Set at 3114	Perforations 2364	To 2795
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 0.076		% Nitrogen 14.618	
Vertical Depth(H) Flange		Pressure Taps Flange		(Meter Run) (Prover) Size 3.068	
Pressure Buildup: Shut in		7/11	20	14	at 11:00 AM (AM) (PM) Taken 7/14
Well on Line: Started		7/14	20	14	at 11:00 AM (AM) (PM) Taken 7/15

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	1.25	15.2	0	60	60	15.2	29.6	NA	NA	72	0
Flow	1.25	13.1	12.8	60	60	13.1	27.5	NA	NA	24	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _v) (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 _{dv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _s
7.771	27.5	18.762	1.162	1.0000	1	169.485	0	0

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2 = 0.8762$; $(P_w)^2 = 0.7563$; $P_d =$ _____ % $(P_c - 14.4) + 14.4 =$ _____ ; $(P_w)^2 = 0.207$; $(P_d)^2 =$ _____

$(P_c)^2 - (P_w)^2$ or $(P_c)^2 - (P_d)^2$	$(P_w)^2 - (P_d)^2$	Choose formula 1 or 2: 1. $P_c^2 - P_w^2$ 2. $P_c^2 - P_d^2$ divided by: $P_c^2 - P_w^2$	LOG of formula 1, or 2, and divided by: $P_c^2 - P_w^2$	Backpressure Curve Slope = "n" Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
0.6692	0.1199	5.5805	0.7467	.850	0.6347	4.3119	730.8122

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 15th day of July, 20 14.

Shawn Hildreth *Shawn Hildreth*
For Company

Witness (if any)

For Commission

Checked by