

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

Test Date:
10-27-2014

API No. 15
15-093-21839-00-00

(See Instructions on Reverse Side)

Company LINN Operating, Inc.		Lease Morgan Land & Cattle			Well Number 1-24
County Kearny	Location NW SW NE SW	Section 24	TWP. 22S	RNG (E/W) 35W	Acres Attributed 640
Field Hugoton		Reservoir Chase	Gas Gathering Connection Onek Field Services		
Completion Date 2/ 26/2009		Plug Back Total Depth 3120	Packer Set at NA		
Casing Size 5.5	Weight 15.5	Internal Diameter 4.95	Set at	Perforations 2562	To 2618
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 .083	% Nitrogen 25.506	Gas Gravity - G _g .7575	
Vertical Depth(H) 		Pressure Taps Flange		(Meter Run) (Prover) Size 3.068	
Pressure Buildup: Shut in		10/24/14	20 14	at 11:00 AM	(AM) (PM) Taken
Well on Line: Started		10/27/14	20 14	at 11:00 AM	(AM) (PM) Taken
				10/27/14	20 14 at 11:00 AM (AM) (PM)
				10/28/14	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 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	.75	8.0	0	60	60	8	22.4	NA	NA	72	0
Flow	.75	6.0	1.5	60	60	6	20.4	NA	NA	24	0

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 _t	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
2.74	20.4	5.532	1.157	1	1	17.537	0	0

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_e)² = 0.207
(P_o)² = _____

(P_c)² = 0.5018 : (P_w)² = 0.4162 : P_o = _____ % (P_c - 14.4) + 14.4 = _____ :

(P _c) ² - (P _o) ² or (P _c) ² - (P _w) ²	(P _o) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _o 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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_o^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
0.2948	0.0850	3.4435	.5370	.850	.4564	2.8605	50.1645

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 5th day of November, 2014.

Received Shawn Hildreth
KANSAS CORPORATION COMMISSION

For Company

Witness (if any)

For Commission

NOV 06 2014

Checked by

CONSERVATION DIVISION
WICHITA, KS