

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Form G-2
(Rev 8/98)

(See Instructions on Reverse Side)

Type Test:

- Open Flow
 Deliverability **WHSIP**

Test Date: 10/22/13

API No. 15-095-20389 - 0000

Company LINN OPERATING, INC.		Lease MESSENGER UNIT			Well Number 1-19	
County KINGMAN	Location W/2 NE SW	Section 19	TWP 29S	RNG (E/W) 7W	Acres Attributed 80	
Field SPIVEY-GRABS-BASIL		Reservoir Mississippi Chat		Gas Gathering Connection WEST WICHITA GAS GATHERING		
Completion Date 07/17/75		Plug Back Total Depth 4136'		Packer Set at		
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter	Set at 4137'	Perforations 4125'	To 4130'	
Tubing Size 2 3/8"	Weight 4.7#	Internal Diameter	Set at 4125'	Perforations	To	
Type Completion (Describe) SINGLE GAS		Type Fluid Production GAS		Pump Unit or Traveling Plunger? PUMP		Yes / No YES
Producing Thru (Annulus/Tubing) Annulus		%Carbon Dioxide		% Nitrogen		Gas Gravity - G _a
Vertical Depth (H) 4260'		Pressure Taps			(Meter Run) (Prover) Size	

Pressure Buildup: Shut In 10/21 20 13 at 7:30 (AM)(PM) Taken 10/22 20 13 at 7:30 (AM)(PM)
Well on line: Started _____ 20 ____ at _____ (AM)(PM) Taken _____ 20 ____ at _____ (AM)(PM)

OBSERVED SURFACE DATA

Duration of Shut-In 24.00

Static/ Dynamic Property	Orifice Size (Inches)	Circle one: Meter Prover Pressure psig	Pressure Differential in Inches H ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P ₁) or (P _c)		Tubing Wellhead Pressure (P _w) or (P ₁) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						87.0	101.4	pump		24.00	
Flow											

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b)(F _p) Mcf/d	Circle one: Meter or Prover Pressure psia	Press. Extension $\sqrt{P_m \times H_w}$	Gravity Factor F _g	Flowing Temperature Factor F _t	Deviation Factor F _{pv}	Metered Flow R (Mcf/d)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(P _c) ² - (P _a) ²	(P _c) ² - (P _w) ²	$\frac{P_c^2 - P_a^2}{(P_c)^2 - (P_w)^2}$	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 (Mcf/d)

Open Flow **Mcf/d @ 14.65 psia** Deliverability **Mcf/d @ 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 16th day of December, 2013

Witness (if any)

For Commission

For Company

Checked by

KCC WICHITA

DEC 20 2013

RECEIVED

I declare under penalty of perjury under the laws of the State of Kansas that I am authorized to request exempt status under Rule K.A.R. 82-3-304 on behalf of the operator LINN OPERATING, INC. and that the foregoing information and statements contained in this application form are true and correct to the best of my knowledge and belief based upon available production summaries and lease records of equipment installation and/or upon type of completion or upon use being made of the gas well herein named.

I hereby request a one-year exemption from open flow testing for the gas well on the grounds that said well: MESSENGER UNIT 1-19

(Check one)

- is a coalbed methane producer
- is cycled on plunger lift due to water
- is a source of natural gas for injection into an oil reservoir undergoing ER
- is on vacuum at the present time; KCC approval Docket No. _____
- is not capable of producing at a daily rate in excess of 250 mcf/D

I further agree to supply to the best of my ability any and all supporting documents deemed by Commission staff as necessary to corroborate this claim for exemption from testing.

Date: 12/16/2013

Signature: Stacey Bagley
Title: Eng/ Geo Tech

Instructions: If a gas well meets one of the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to claim exempt status for the gas well. At some point during the current calendar year, wellhead shut-in pressure shall have been measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under **OBSERVED SURFACE DATA**. Shut-in pressure shall thereafter be reported yearly in the same manner for so long as the gas well continues to meet the eligibility criterion or until the claim of eligibility from exemption IS denied.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The form must be signed and dated on the front side as though it was a verified report of annual test results. it was a verified report of test results.