Form G-2
July 2014

# KANSAS CORPORATION COMMISSION
# ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test: *(See Instructions on Reverse Side)*

☐ Open Flow
☐ Deliverabilty

Test Date: 12/16 & 17, 2014

API No. 15: 15-097-21700-00-00

| Company | Lease | Well Number |
|---|---|---|
| HERMAN L. LOEB LLC | HARDY | #3 |

| County | Location | Section | TWP | RNG (E/W) | Acres Attributed |
|---|---|---|---|---|---|
| KIOWA | SE NE | 23 | 28S | 18W | |

| Field | Reservoir | Gas Gathering Connection |
|---|---|---|
| HARDY | MISSISSIPPI CHERT | ONEOK FIELD SVCS. |

| Completion Date | Plug Back Total Depth | Packer Set at |
|---|---|---|
| 8/16/2011 | 4845 | NONE |

| Casing Size | Weight | Internal Diameter | Set at | Perforations | To |
|---|---|---|---|---|---|
| 5.500 | 15.50 | 4.976 | 4875 | 4806 | 4838 |

| Tubing Size | Weight | Internal Diameter | Set at | Perforations | To |
|---|---|---|---|---|---|
| 2.375 | 4.700 | 1.995 | 4822 | OPEN | |

| Type Completion (Describe) | Type Fluid Production | Pump Unit or Traveling Plunger? Yes / No |
|---|---|---|
| SINGLE | GAS, WATER, OIL | PUMPING |

| Producing Thru (Annulus / Tubing) | % Carbon Dioxide | % Nitrogen | Gas Gravity - $G_g$ |
|---|---|---|---|
| ANNULUS | | | |

| Vertical Depth(H) | Pressure Taps | (Meter Run) (Prover) Size |
|---|---|---|
| 4821 | | |

Pressure Buildup: Shut in 12/16 20 14 at _____ (AM) (PM) Taken 12/17 20 14 at _____ (AM) (PM)

Well on Line: Started _____ 20 ___ at _____ (AM) (PM) Taken _____ 20 ___ at _____ (AM) (PM)

## OBSERVED SURFACE DATA

Duration of Shut-in _____ Hours

| Static / Dynamic Property | Orifice Size (inches) | Circle one: Meter Prover Pressure psig (Pm) | Pressure Differential in Inches $H_2O$ | Flowing Temperature t | Well Head Temperature t | Casing Wellhead Pressure ($P_w$) or ($P_t$) or ($P_c$) psig | Casing psia | Tubing Wellhead Pressure ($P_w$) or ($P_t$) or ($P_c$) psig | Tubing psia | Duration (Hours) | Liquid Produced (Barrels) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Shut-In | | | | | | 160 | | 90 | | 24 | |
| Flow | | | | | | | | | | | |

## FLOW STREAM ATTRIBUTES

| Plate Coeffiecient ($F_b$) ($F_p$) Mcfd | Circle one: Meter or Prover Pressure psia | Press Extension $\sqrt{P_m x h}$ | Gravity Factor $F_g$ | Flowing Temperature Factor $F_{tt}$ | Deviation Factor $F_{pv}$ | Metered Flow R (Mcfd) | 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 $(P_d)^2$ = _____

| $(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$ | $(P_c)^2 - (P_w)^2$ | Choose formula 1 or 2: 1. $P_c^2 - P_a^2$ 2. $P_c^2 - P_d^2$ divided by: $P_c^2 - P_w^2$ | LOG of formula 1. or 2. and divide by: $P_c^2 - P_w^2$ | Backpressure Curve Slope = "n" --or-- Assigned Standard Slope | n x LOG | Antilog | Open Flow Deliverability Equals R x Antilog (Mcfd) |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |

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 30TH day of DECEMBER, 20 14.

Received
KANSAS CORPORATION COMMISSION

Witness (if any) _____ For Company _____

JAN 02 2015

For Commission _____ Checked by _____

CONSERVATION DIVISION
WICHITA, KS

Form G-2
(Rev. 7/03)

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 HERMAN L. LOEB LLC and that the foregoing pressure information and statements contained on 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 HARDY #3 gas well on the grounds that said well:

*(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: 12/30/2014

Received
KANSAS CORPORATION COMMISSION
JAN 02 2015
CONSERVATION DIVISION
WICHITA, KS

Signature: _____

Title: Shane Pelton, Prod Supervisor Herman L. Loeb LLC

**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 for 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.