

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date:
1/15/15

API No. 15
15-187-20412 - 0000

Company NORTHSTAR INVESTMENTS, INC.		Lease HEBBERD		Well Number 1-14	
County STANTON	Location SW SW NE	Section 14	TWP 30S	RNG (E/W) 42W	Acres Attributed 640
Field SPARKS NE		Reservoir MISSISSIPPIAN		Gas Gathering Connection DCP MIDSTREAM	
Completion Date 11/18/1986		Plug Back Total Depth 5510		Packer Set at 5268	
Casing Size 4 1/2	Weight 10.5	Internal Diameter 4.052	Set at 5399	Perforations 5204	To 5253
Tubing Size 2 3/8	Weight 4.7	Internal Diameter 1.995	Set at 5268	Perforations N/A	To N/A
Type Completion (Describe) 51,000 FRAC		Type Fluid Production SALTWATER		Pump Unit or Traveling Plunger? Yes / No PUMPING UNIT	
Producing Thru (Annulus / Tubing) ANNULUS		% Carbon Dioxide ?		% Nitrogen ? Gas Gravity - G _g .7 EST	
Vertical Depth(H) 5700		Pressure Taps pressure increased from 55 to 85 psi			(Meter Run) (Prover) Size
Pressure Buildup: Shut in <u>1/15</u> 20 <u>15</u> at <u>11am</u> (AM) (PM) Taken <u>1/16</u> 20 <u>15</u> at <u>11am</u> (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 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 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						85	99.4				
Flow											

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _p) (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

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(P _c) ² - (P _o) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _o 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 2nd day of MARCH, 20 15.

Witness (if any) _____
For Commission _____
Received
KANSAS CORPORATION COMMISSION
For Company _____
Checked by _____

MAR 04 2015

CONSERVATION DIVISION
WICHITA, KS

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 NORTHSTAR INVESTMENTS, INC. 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 HEBBERD 1-14 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: 3/2/2015

Received
KANSAS CORPORATION COMMISSION

MAR 04 2015

CONSERVATION DIVISION
WICHITA, KS

Signature: _____

Dean Butting

Title: _____

President

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.