

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

- Open Flow
 Deliverability

Test Date:
5/2/2010

API No. 15
15-055-21917-00-00

Company Norstar Petroleum Inc.		Lease Widows		Well Number 1-31	
County Finney	Location NW	Section 31	TWP 21S	RNG (E/W) 31W	Acres Attributed 640
Field Hugoton		Reservoir Krider		Gas Gathering Connection	
Completion Date 11/6/2006		Plug Back Total Depth 2768		Packer Set at	
Casing Size 4 1/2"	Weight 10.5	Internal Diameter	Set at 2816'	Perforations 2708	To 2718
Tubing Size 2 3/8"	Weight	Internal Diameter	Set at 2700	Perforations	To
Type Completion (Describe)		Type Fluid Production		Pump Unit or Traveling Plunger? Yes / No Pump Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H)		Pressure Taps		Gas Gravity - G _g (Meter Run) (Prover) Size	

Pressure Buildup: Shut in 4/30 20 10 at (AM) (PM) Taken 5/2 20 10 at (AM) (PM)
Well on Line: Started _____ 20 _____ at (AM) (PM) Taken _____ 20 _____ at (AM) (PM)

OBSERVED SURFACE DATA

Duration of Shut-in **48** 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 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	0.5					67					
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_g = _____ % (P_c - 14.4) + 14.4 = _____ : (P_w)² = 0.207
(P_g)² = _____

(P _c) ² - (P _g) ² or (P _c) ² - (P _w) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _w ² 2. P _c ² - P _g ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	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 5th day of May, 2010

RECEIVED
KANSAS CORPORATION COMMISSION

[Signature]
For Company

Witness (if any)

For Commission

MAY 10 2010

Checked by

CONSERVATION DIVISION
WICHITA, KS