

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test: (See Instructions on Reverse Side)

- Open Flow
 Deliverability

Test Date:
11/1/11

API No. 15
15-175-22181 - 0000

Company NOBLE ENERGY		Lease BLACK			Well Number 3-15
County SEWARD	Location 953 FSL & 1637 FEL	Section 15	TWP 34S	RNG (E/W) 31W	Acres Attributed
Field ARKALON		Reservoir U. MORROW		Gas Gathering Connection DCP MIDSTREAM	
Completion Date 8-2-10		Plug Back Total Depth 5616		Packer Set at NONE	
Casing Size 5.5	Weight 17.0	Internal Diameter 4.892	Set at	Perforations 5665-5572	To 5575-5580
Tubing Size 2.375	Weight 4.7	Internal Diameter 1.995	Set at 5533	Perforations	To
Type Completion (Describe) SINGLE GAS		Type Fluid Production WATER		Pump Unit or Traveling Plunger? Yes / No NO	
Producing Thru (Annulus / Tubing) TUBING		% Carbon Dioxide 0.143		% Nitrogen 3.304	Gas Gravity - G _g 0.659
Vertical Depth(H) 5573		Pressure Taps FLANGE			(Meter Run) (Prover) Size 3.068"
Pressure Buildup: Shut in 10/28/11 20 at 0930 (AM) (PM) Taken 10/31/11 20 at 0930 (AM) (PM)					
Well on Line: Started 10/31/11 20 at 0930 (AM) (PM) Taken 11/1/11 20 at 0930 (AM) (PM)					

OBSERVED SURFACE DATA

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter Prover Pressure psig (P _m)	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						1051.1	1065.5	1063.0	1077.4	72.0	
Flow	1.000	54.6	64.0	60	75	831.7	846.1	771.2	785.6	24.0	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (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
4.9116	69.00	66.45	1.2318	1.0000	1.0064	404.6	NONE	0.659

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2 = 1135.3$; $(P_w)^2 = 715.9$; $P_d = 79.4$ % ; $(P_c - 14.4) + 14.4 = 1065.5$; $(P_a)^2 = 0.207$; $(P_d)^2 =$

$(P_c)^2 - (P_a)^2$ 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" ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
1135.08	419.41	2.706	0.4324	0.648	0.2802	1.9063	771.36

Open Flow **771** 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 1 day of NOVEMBER, 20 11

Copy to KCC Wichita
 Witness (if any)
Copy to KCC Dodge City
 For Commission

Precision Well Log & Testing
 For Company
Marked Paul
 Checked by
RECEIVED

NOV 15 2011

KCC WICHITA

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 _____ 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 _____ 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: _____

Signature: _____

Title: _____

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.