KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST
(See Instructions on Reverse Side)

Type Test:
- [✓] Open Flow
- [ ] Deliverabilty

Test Date: 7/7/2014

API No. 15
15-007-22439 – **0000**

Company Chesapeake Operating, L.L.C.	**Lease** Harbaugh H		**Well Number** 1-27

County	Location	Section	TWP	RNG (E/W)	Acres Attributed
Barber	660 FSL & 2310 FWL	27	33S	14W	

Field	Reservoir	Gas Gathering Connection	
Aetna	Mississippi	Oneok Energy Service	KCC WICHITA JUN 05 2015 RECEIVED

Completion Date	Plug Back Total Depth	Packer Set at
7/29/94	4728	None

Casing Size	Weight	Internal Diameter	Set at	Perforations	To
5 1/2	14	5.012	4849	4658	4740

Tubing Size	Weight	Internal Diameter	Set at	Perforations	To
2 3/8	4.7	1.995	4658		

Type Completion (Describe)	Type Fluid Production	Pump Unit or Traveling Plunger? Yes / No
Single GaS	Water	Pump Unit

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

Vertical Depth(H)	Pressure Taps	(Meter Run) (Prover) Size
4699		

Pressure Buildup: Shut in 7/6 20 14 at 8:00 (AM) (PM) Taken 7/7 20 14 at 8:00 (AM) (PM)

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

OBSERVED SURFACE DATA   Duration of Shut-in 24 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	psia	Tubing Wellhead Pressure (P_w) or (P_t) or (P_c) psig	psia	Duration (Hours)	Liquid Produced (Barrels)
Shut-In						110	124.4	0	14.4	24	
Flow											

FLOW STREAM ATTRIBUTES

Plate Coeffiecient (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_{tf}	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 _____ day of May _____ , 20 15 .

_____
Witness (if any)

_____
For Company

_____
For Commission

_____
Checked by

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 <u>Chesapeake Operating, L.L.C.</u> 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 <u>Harbaugh H 1-27</u> 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

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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: <u>5/11/2015</u>

Signature: _Katie Wright_

Title: Katie Wright, Regulatory Analyst

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.