

15-007-21418-0000

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

Type Test:

- Open Flow  
 Deliverability

(See Instructions on Reverse Side)

Test Date: 11/20/2011

API No. 15-007-21,418-0000

Company Hayes Oil & Gas LLC		Lease Thompson		Well Number A2	
County Barber	Location C W2 NE/4	Section 13	TWP 32	RNG (E/W) 10W	Acres Attributed
Field Sharon		Reservoir Mississippi		Gas Gathering Connection <b>Pioneer Exploration, LC</b>	
Completion Date		Plug Back Total Depth 4390		Packer Set at <b>N/A</b>	
Casing Size 5 1/2	Weight 15.5	Internal Diameter	Set at 4381	Perforations	To
Tubing Size 2 7/8"	Weight 6.5	Internal Diameter	Set at	Perforations 4359-68	To
Type Completion (Describe) <b>Single (Gas)</b>		Type Fluid Production <b>Oil + Saltwater</b>		Pump Unit or Traveling Plunger? <input checked="" type="checkbox"/> Yes / No <b>Pumping Unit</b>	
Producing Thru (Annulus / Tubing) <b>Annulus</b>		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H)		Pressure Taps		(Meter Run) (Prover) Size	

Pressure Buildup: Shut in 11/20 20 11 at \_\_\_\_\_ (AM) (PM) Taken 11/21 20 11 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 <sub>2</sub> O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						210.9	225.3			24	
Flow											

**FLOW STREAM ATTRIBUTES**

Plate Coefficient (F <sub>b</sub> ) (F <sub>p</sub> ) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F <sub>g</sub>	Flowing Temperature Factor F <sub>t</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>

**(OPEN FLOW) (DELIVERABILITY) CALCULATIONS**

(P<sub>w</sub>)<sup>2</sup> = 0.207

(P<sub>c</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> divided by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1. or 2. and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	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 16th day of December, 20 11.

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*Shayne A. Hayes*  
For Company

Witness (if any)

DEC 23 2011

For Commission

Checked by

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 Hayes Oil and Gas 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 Thompson A2 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: 12/16/2011

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DEC 23 2011  
KCC WICHITA

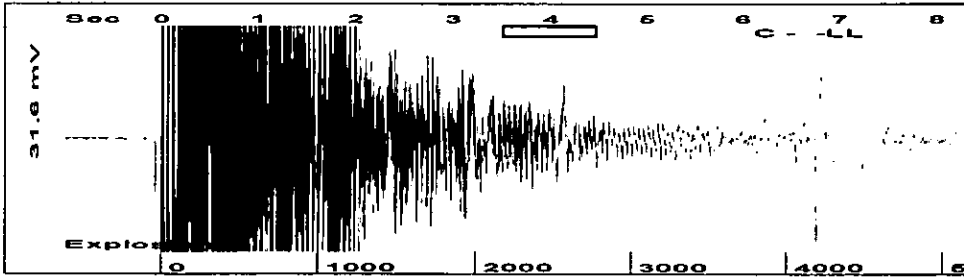
Signature: Shayne A. Hayes  
Title: Production Superintendent

**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.

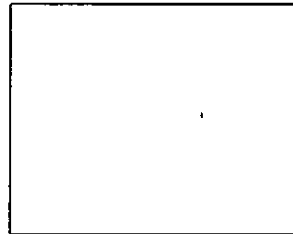
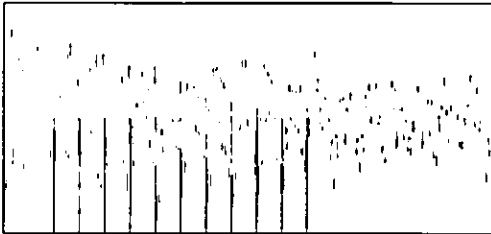
The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The form must be signed and dated on the front side as though it was a verified report of annual test results.

Group MyWells Well: TOMP\_A2 (acquired on: 11/21/11 15:29:14)



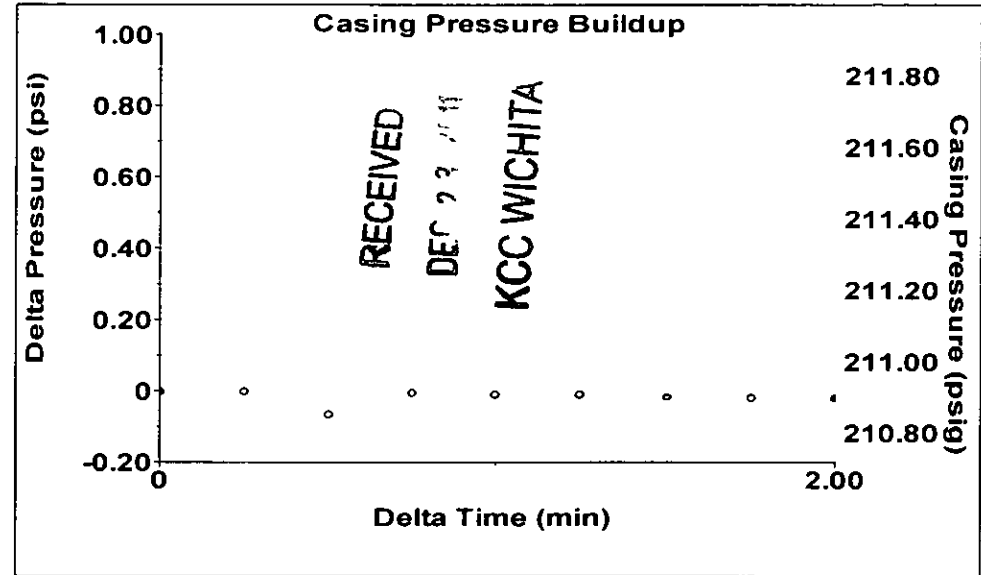
Filter Type High Pass Automatic Collar Count Yes Time 6.747 sec  
 Manual Acoustic Velo 1236.29 ft/s Manual JTS/sec 19.305 Joints 130.58 Jts  
 Depth 4181.18 ft

[ 3.5 to 4.5 (Sec) ]



Analysis Method: Automatic

Group MyWells Well: TOMP\_A2 (acquired on: 11/21/11 15:29:14)



Change in Pressure -0.02 psi PT4212 Range 0 - 1500 psi  
 Change in Time 2.00 min

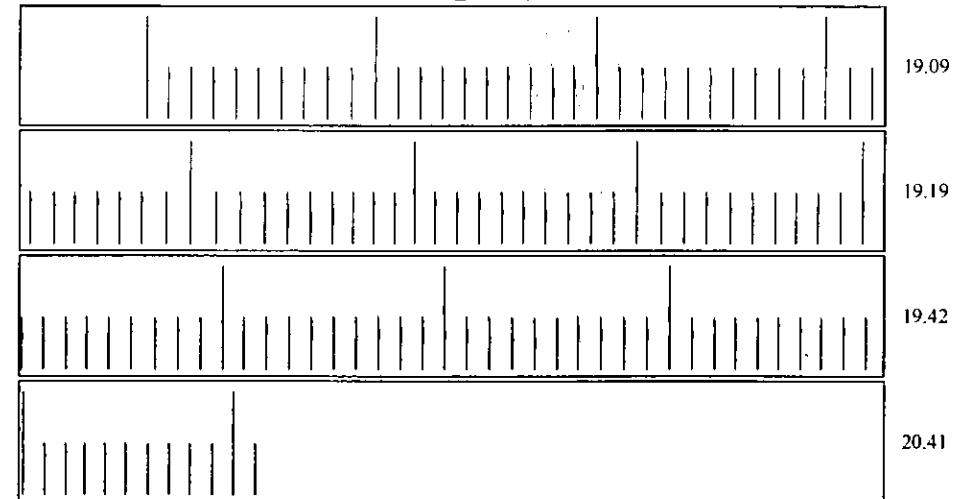
Group: MyWells Well: TOMP\_A2 (acquired on: 11/21/11 15:29:14)

<b>Production</b>		<b>Casing Pressure</b>	
Current	Potential	210.9	psi (g)
Oil 3	3.7 BBL/D	Casing Pressure Buildup	-0.0 psi
Water 300	369.5 BBL/D		2.00 min
Gas 15	18.5 Mscf/D	Gas/Liquid Interface Pressure	236.6 psi (g)
IPR Method Vogel		Liquid Level	
PBHP/SBHP	0.38	Main Depth to Liquid Level	4181.18 ft
Production Efficiency	81.2	Formation Depth	4381 ft
Oil 25 deg.API			
Water 1.16 Sp.Gr.H2O			
Gas 0.72 Sp.Gr.AIR			
Acoustic Velocity	1239.42 ft/s		



<b>Producing</b>	
Annular Gas Flow	0 Mscf/D
% Liquid	100 %
Pump Intake Pressure	
	277.8 psi (g)
Producing BHP	
	323.5 psi (g)
Static BHP	
	885.3 psi (g)

Group: MyWells Well: TOMP\_A2 (acquired on: 11/21/11 15:29:14)



Acoustic Velocity	1239.42 ft/s	Joints counted	121
Joints Per Second	19.3538 jts/sec	Joints to liquid level	130.58
Depth to liquid level	4181.18 ft	Filter Width	17.305
Automatic Collar Count	Yes	Time to 1st Collar	0.296
			6.548

**Hayes Oil and Gas L.L.C**

P.O. Box 108

Attica, KS. 67009

Conservation Division

Finney State Office Building

130 S. Market Rm. 2078

Wichita, KS. 67009-0108

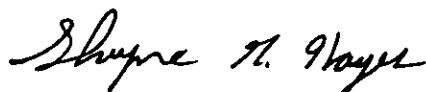
**R.E. Tests for Thompson A Lease and Werner Lease**

Dear Mr. Hemmen:

Please find the enclosed tests for the Thompson A lease (Barber Co.) and the Werner (Harper Co). The test for the Thompson B lease will be sent shortly.

Please let apologize for the delay. The fluid levels and shut-ins were done back in the 11<sup>th</sup> month, but because of an error on my part they were not sent in.

Sincerely,



Shayne G. Hayes

Production Superintendent

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