

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

FORM G-2
(Rev.8/98)

TYPE TEST:

☒ Open Flow
☐ Deliverability

TEST DATE: 8/28/01 API No. 15-075-20743

Company Horsehoe Operating Inc		Lease Virginia		Well Number 1	
County Hamilton	Location SE	Section 6-21s-40w	TWP	RNG (E/W)	Acres Attributed 480
Field Bradshaw	Reservoir Winfield	Gas Gathering Connection Duke			
Completion Date 5-1-1	Plug Back Total Depth 2827	Packer Set at			
Casing Size 4.500	Weight 10.500	Internal Diameter 4.090	Set at 2831	Perforations 2791	To 2796
Tubing Size 2.375	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) New well gas	Type Fluid Production water	Pump Unit or Traveling Plunger? pumping unit			
Producing Thru (Annulus/Tubing) casing	% Carbon Dioxide .006	% Nitrogen 26.864	Gas Gravity- Gg .760		
Vertical Depth (H) 2793	Pressure Taps flange	Meter Run Size 2.067			
Pressure Buildup: Shut in	8/24/01 @ 1300	TAKEN	8/24/01 @ 1430		
Well on Line: Started	8/27/01 @ 1430	TAKEN	8/28/01 @ 1030		

OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H ₂ O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P _w) (P _t) (P _c)		Tubing WellHead Press. (P _w) (P _t) (P _c)		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						146	160			73.5	
Flow	1.000	139.0	.50	79		139	153			22.0	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcf/d	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcf/d	GOR	G _m
5.073	153.4	8.76	1.1471	.9822	1.0109	50		.760

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS							(Pa) ² = 0.207
(Pc) ² = 25.7	(Pw) ² = 23.5	Pd =	%	(Pc - 14.4) + 14.4 =	(Pd) ² =		
(Pc) ² - (Pa) ²	(Pc) ² - (Pw) ²	$\frac{(Pc)^2 - (Pa)^2}{(Pc)^2 - (Pw)^2}$ or $\frac{(Pc)^2 - (Pd)^2}{(Pc)^2 - (Pw)^2}$	LOG	Backpressure Curve Slope "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	
						Open Flow Deliverability = R x Antilog Mcfd	
25.52	2.19	11.657	1.0666	.606	.6464	4.429	
						224	

OPEN FLOW 224 Mcf/d @ 14.65 psia DELIVERABILITY Mcf/d @ 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 herein and that said report is true and correct. Executed this the 25 day of Sept, 20 01

Witness (if any)

For Commission

For Company

Checked by

I declare under penalty or 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 Horsehoe Operating Inc and that the foregoing information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon gas production records and records of equipment installation and/or of type completion or upon use of the gas well herein named.

I hereby request a permanent exemption from open flow testing for the Virginia 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 incapable of producing at a daily rate in excess of 150 mcf/D

Date: _____

Signature: _____

Title: _____

Instructions:

All active gas wells must have at least an original G-2 form on file with the conservation division. If a gas well meets 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 obtain a testing exemption.

At some point during the succeeding calendar year, wellhead shut-in pressure shall be 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.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than thirty (30) days after the taking of the pressure reading. The form must be signed and dated on the front side as though it was a verified report of test results.