

KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
 (Rev. 8/98)

TYPE TEST:

- ☒ Open Flow
☒ Deliverability

TEST DATE: 11/17/99

API No. 15-071-206750000

Company Horsehoe Operating Inc		Lease Floyd		Well Number 3	
County Greeley	Location C SE SW SW	Section 24 19s 40w	TWP 40w	RNG (E/W) 6-34	Acres Attributed 640
Field Bradshaw		Reservoir Winfield		Gas Gathering Connection	
Completion Date		Plug Back Total Depth 2869		Packer Set at	
Casing Size 4.500	Weight 10.500	Internal Diameter 4.052	Set at 2568	Perforations 2835	To 2843
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 2846	Perforations	To
Type Completion (Describe) Single-Gas		Type Fluid Production Water		Pump Unit or Traveling Plunger? pumping unit	
Producing Thru (Annulus/Tubing) casing		% Carbon Dioxide .047		% Nitrogen 31.109	Gas Gravity- Gg .770
Vertical Depth (H) 2841		Pressure Taps Flange		Meter Run Size 2.067	
Pressure Buildup: Shut in 11/13/99 @ 8:00am		TAKEN 11/16/99 @ 3:40pm			
Well on Line: Started 11/16/99 @ 3:40pm		TAKEN 11/17/99 @ 9:30am			

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						75	88			66.0	
Flow	1.000	40.0	8.00	48		54	67			18.0	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR F _g	FLOWING TEMP FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
5.070	53.4	20.67	1.1396	1.0117	1.0044	121		.770

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS							(Pa) ² = 0.207
(Pc) ² = 7.8	(Pw) ² = 4.6	46.4	%	(Pc - 14.4) + 14.4 =	(Pd) ² = 1.68		
$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$ or $\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	LOG	Backpressure Curve Slope "n" ---- or ---- Assigned Standard Slope	n x LOG	Antilog	
						Open Flow Deliverability = R x Antilog Mcfd	
7.64	3.23	2.363	.3735	.787	.2939	1.967	
6.13	3.23	1.898	.2784	.787	.2191	1.656	

OPEN FLOW 238 Mcfd @ 14.65 psia **DELIVERABILITY** 200 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 herein and that said report is true and correct. Executed this the 24 day of Nov, 19 99

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 Floyd 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: 11-24-99

Signature: Paul J. [Signature]

Title: Tester

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.