

KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
(Rev.8/98)

TYPE TEST:

- ☒ Open Flow
☒ Deliverability

TEST DATE: 10/30/99 API No. 15-075-20606

Company Horsehoe Operating Inc		Lease White		Well Number 1	
County Hamilton	Location NE	Section 7	TWP 23s	RNG(E/W) 40	Acres Attributed 320
Field Bradshaw	Reservoir Winfield	Gas Gathering Connection Heritage			
Completion Date 10-3-96	Plug Back Total Depth 2595	Packer Set at			
Casing Size 4.500	Weight 11.600	Internal Diameter 4.000	Set at 2604	Perforations 2567	To 2582
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 2584	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 .029	% Nitrogen 28.440	Gas Gravity- Gg .772		
Vertical Depth (ft) 2574	Pressure Taps Flange	Meter Run Size 2.067			
Pressure Buildup: Shut in	10/25/99 @ 11:00am	TAKEN	10/25/99 @ 8:45am		
Well on Line: Started	10/29/99 @ 8:45am	TAKEN	10/30/99 @ 1:00pm		

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						113	127			93.8	
Flow	1.000	80.0	1.00	60		82	95			28.3	11.0

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcf/d	(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 Mcf/d	GOR	G _m
5.070	93.4	9.66	1.1381	1.0000	1.0075	56	6022.8	1.342

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

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$(P_c)^2 = 16.2$	$(P_w)^2 = 9.1$	62.9	%	$(P_c - 14.4) + 14.4 =$	$(P_a)^2 = 0.207$	$(P_d)^2 = 6.40$	
$(P_c)^2 - (P_a)^2$ 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 $\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_w)^2}$	LOG	Backpressure Curve Slope "n" --- or --- Assigned Standard Slope	$n \times \text{LOG}$	Antilog	Open Flow Deliverability = R x Antilog Mcf/d
16.00	7.06	2.265	.3551	.850	.3018	2.004	112
9.78	7.06	1.384	.1413	.850	.1201	1.318	74

OPEN FLOW 112 Mcfd @ 14.65 psia DELIVERABILITY 74 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 4 day of Nov, 19 99

Witness (if any)

For Commission

Original: Wichita
Copy : Dodge City
Copy: Horseshoe Operating

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 White 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.