

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

FORM C-2  
8-7-53  
1-3-91

TYPE TEST:  Deliverability  Open Flow TEST DATE: 3/09/90 **15-181-20040-00-00**

COMPANY: GOODLAND GAS COMPANY LEASE: Glasco WELL NO.: 1-6

COUNTY: Sherman LOCATION: SE 1/4 SECTION: 6 TWP: 8S RNO: 38W. ACRES:

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KNEnergy

COMPLETION DATE: 11-7-78 PLUG BACK TOTAL DEPTH: 942' PACKER SET AT: None

CASINO SIZE: 4 1/2" WT.: 9.5#/ft. I.D.: SET AT: 910' PERF.: None TO:

TUBING SIZE: None WT.: I.D.: SET AT: PERF.: TO:

TYPE COMPLETION (Describe): Open hole TYPE FLUID PRODUCTION: Gas Gas

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: BAR. PRESS - P<sub>a</sub>: P<sub>isa</sub>

GAS GRAVITY - G<sub>g</sub>: 0.5890 % CARBON DIOXIDE: 1.98 % NITROGEN: 2.790 API GRAVITY OF LIQUID: --

VERTICAL DEPTH (H): TYPE METER CONN.: Orifice-Flange (METER RUN) (PROVER) SIZE: 2.067

SHUT-IN PRESSURE: SHUT IN 2/9 19: 90 AT 9:00 (AM)(PM) TAKEN 2/12 19: 90 AT 10:15 (AM)(PM) X

FLOW TEST: STARTED 2/22 19: 90 AT 8:00 (AM)(PM) TAKEN 2/23 19: 90 AT 8:00 (AM)(PM) X

**OBSERVED DATA** DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE In.	(METER) (PROVER) PRESSURE psig	DIFF. In. (h <sub>w</sub> )	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASINO WELLHEAD PRESS		TUBING WELLHEAD PRESS		DURATION HOURS	LIQUID PROD. Boia.
						psig	(P <sub>w</sub> )(P <sub>c</sub> ) psia	psig	(P <sub>w</sub> )(P <sub>c</sub> ) psia		
SHUT-IN	--	--	--	--	--	20	34.4	--	--	72	--
FLOW	0.5	9.2	0.3	26	--	12	26.4	--	--	24	--

**RATE OF FLOW CALCULATIONS**

COEFFICIENT (F <sub>o</sub> ) (F <sub>g</sub> ) M <sub>cd</sub>	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP. FACTOR F <sub>t</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R M <sub>cd</sub>	GOR	G <sub>m</sub>
1.219	23.6	2.61	1.3030	1.034	1.0009	4	--	--

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

(P<sub>c</sub>)<sub>o</sub> = 1.183 ; (P<sub>w</sub>)<sub>o</sub> = 0.697 ; P<sub>d</sub> = -- % (P<sub>c</sub> - 14.4) + 14.4 = -- ; (P<sub>d</sub>)<sub>o</sub> = 0.207 ; (P<sub>d</sub>)<sub>o</sub> = --

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG M <sub>cd</sub>
0.976	0.486	2.007	0.303	0.85	0.257	1.81	8

OPEN FLOW M<sub>cd</sub> @ 14.65 psia DELIVERABILITY M<sub>cd</sub> @ 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 31<sup>st</sup> day of Dec, 1990

*John P. Sanders*  
For Company

Witness (if any)  
For Commission

1-2-91  
CORPORATION COMMISSION  
Wichita, Kansas

Checked by