

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

FORM G-2
8-7-58

TYPE TEST: Deliverability Open Flow TEST DATE: 6-2-86

COMPANY: GOODLAND GAS COMPANY LEASE: Glasco WELL NO.: 1-31

COUNTY: Sherman LOCATION: SE 1/4 SECTION: 31 TWP: 7S RNG: 38W ACRES: .

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: 11-6-78 PLUG BACK TOTAL DEPTH: 971 PACKER SET AT: --

CASING SIZE: 4 1/2 WT. I.D. SET AT 921 PERF. TO None

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

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

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: BAR. PRESS - P_a: 13.2 XXXX Psia

GAS GRAVITY - G_g: 0.5837 % CARBON DIOXIDE: 1.98 % NITROGEN: 2.79 API GRAVITY OF LIQUID: .

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

SHUT-IN PRESSURE: SHUT IN 5-25 19.86 AT (AM)(PM) TAKEN 5-30 19.86 AT (AM)(PM)

FLOW TEST: STARTED 5-30 19.86 AT (AM)(PM) TAKEN 6-2 19.86 AT (AM)(PM)

OBSERVED DATA DURATION OF SHUT-IN HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h _w)(h _d)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASINO WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w)(P _t)(P _c) psia	psig	(P _w)(P _t)(P _c) psia		
SHUT-IN	--	--	--	--	--	33	46.2	--	--	72+	--
FLOW	0.750	--	--	64	--	22.8	36	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F ₁)(F ₂) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
115.1	--	--	1.3089	0.9962	1.0014	130	--	--

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = _____ (P_w)² = _____ P_d = _____ % (P_c - 14.4) + 14.4 = _____ (P_w)² = 0.207 (P_d)² = _____

$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_a^2}{P_c^2 - P_d^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
1.960	0.838	2.338	0.369	0.727	0.268	1.854	241

OPEN FLOW 241 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 25th day of Nov, 1986.

Robert M. Richardson
For Company

Witness (if any)

DEC 5 1986

For Commission

Checked by DEC 1 1986