

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

FORM O-2
 8-7-58

15-181-20039-0000

TYPE TEST: Deliverability Open Flow TEST DATE: Flow test 6-2-87

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: KNEnergy

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 None

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

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: 14.4 Psia BAR. PRESS - P_a

GAS GRAVITY - G_g: 0.5827 % CARBON DIOXIDE: 1.28 % NITROGEN: 2.635 API GRAVITY OF LIQUID:

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

SHUT-IN PRESSURE: SHUT IN 5-29 19 87 AT 11:07 (AM)(PM) TAKEN 6-1 19 87 AT 11:49 (AM)(PM)

FLOW TEST: STARTED 6-1 19 87 AT 11:51 (AM)(PM) TAKEN 6-2 19 87 AT 11:29 (AM)(PM)

OBSERVED DATA

DURATION OF SHUT-IN 72 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	CASING WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w)(P _i)(P _c) psia	psig	(P _w)(P _i)(P _c) psia		
SHUT-IN	--	--	--	--	--	28.7	43.1	--	--	72	--
FLOW	0.750	21.9	10.1	60	--	22.0	36.4	--	--	24	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _o)(F _d) Mcfd	(METER) (PROVER) 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
115.1	36.3	19.15	1.31	1.00	1.0007	69	--	--

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 1857.61 ; (P_w)² = 1324.96 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_d)² = 0.207 ; (P_d)² = _____

$\frac{(P_c)^2 - (P_d)^2}{(P_c)^2 - (P_w)^2}$	(P _c) ² - (P _w) ²	$\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
1650.25	532.65	3.10	0.49	0.727	0.36	2.28	157

OPEN FLOW 15 Mcfd @ 14.65 psia DELIVERABILITY RECEIVED 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 4 day of June, 1987

STATE CORPORATION COMMISSION
 JUN 12 1987
 [Signature]
 WICHITA, KANSAS

Witness (if any)

Checked by