

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

FORM O-2
 8-7-58

TYPE TEST: Deliverability Open Flow TEST DATE: 6-2-86 15-181-20242-00-00

COMPANY: GOODLAND GAS COMPANY LEASE: Armstrong WELL NO.: 2-6
 COUNTY: Sherman LOCATION: NE 1/4, NE 1/4, NE 1/4 SECTION: 6 TWP: 8S RNG: 39W ACRES:
 FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy
 COMPLETION DATE: 3-30-83 PLUG BACK TOTAL DEPTH: 1124 PACKER SET AT: None
 CASINO SIZE: 4 1/2" WT. 9.5#/ft. L.D. SET AT 1144 PERF. 1019 TO 1031
 TUBING SIZE: 4 1/2" WT. L.D. SET AT PERF. TO

TYPE FLUID PRODUCTION: Gas
 TYPE COMPLETION (Describe): Frac 100,000# Sd., 918 Bbls H2O
 PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: 13.2 BAR. PRESS - P_a: 144 Psia
 GAS GRAVITY - G_g: 0.5837 % CARBON DIOXIDE: 1.98 % NITROGEN: 2.79 API GRAVITY OF LIQUID:
 VERTICAL DEPTH (ft): TYPE METER CONN.: Orifice (METER RUN) (PROVER) SIZE: 2.067
 SHUT-IN PRESSURE: SHUT IN 5-27 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

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 _i)(P _c) psia	psig	(P _w)(P _i)(P _c) psia		
SHUT-IN	--	--	--	--	--	38.5	51.7	--	--	72	--
FLOW	0.750	--	--	68	--	17.8	31	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _o) _{Mafd}	(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 Mafd	GOR	G _m
115.1	--	--	1.3089	0.9924	1.0010	117	--	--

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = _____ (P_w)² = _____ P_d² = _____ % (P_c - 14.4) + 14.4 = _____ (P_w)² = 0.207 (P_d)² = _____

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mafd
2.499	1.712	1.460	0.164	1.000	0.164	1.460	141
				0.500	0.082	1.208	171

OPEN FLOW 141-171 Mafd @ 14.65 psia DELIVERABILITY Mafd @ 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

Checked by

DEC 11 1986

For Commission