

15-181-20258-00-00
STATE OF KANSAS - CORPORATION COMMISSION
 ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

P. 23-8
 FORM G-2
 8-7-58

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

COMPANY: **GOODLAND GAS COMPANY** LEASE: **Weary** WELL NO.: **1-16**

COUNTY: **Sherman** LOCATION: **NW 1/4, SW 1/4** SECTION: **16** TWP: **8S** RNG: **39W** ACRES: _____

FIELD: **Goodland** RESERVOIR: **Niobrara** PIPELINE CONNECTION: **KN Energy**

COMPLETION DATE: **10-12-83** PLUG BACK TOTAL DEPTH: **1097** PACKER SET AT: **None**

CASING SIZE: **4 1/2"** WT. **9.5#/ft.** I.D. _____ SET AT: **1133** PERF.: **986** TO: **1002**

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

TYPE COMPLETION (Describe): **Frac 100,000# Sd., 950 Bbls H₂O** TYPE FLUID PRODUCTION: **Gas**

PRODUCING THRU: **Casing** RESERVOIR TEMPERATURE: _____ BAR. PRESS - P_a: **13.2** 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 **5-12** 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 psia	DIFF. in. (h _w)(h _d)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASING WELL-HEAD PRESS.		TUBING WELL-HEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psia	(P _w)(P _i)(P _c) psia	psia	(P _w)(P _i)(P _c) psia		
SHUT-IN	--	--	--	--	--	23.5	36.7	--	--	72+	--
FLOW	0.375	--	--	59	--	13.8	27	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _d) (P _w) 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	Q _m
28.4	--	--	1.3089	1.0010	1.0008	13	--	--

(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 = _____

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
1.173	0.618	1.898	0.278	0.8506	0.237	1.725	22

OPEN FLOW **22** 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)

For Commission

Checked by

DEC 5 1986

DEC 1 1986