

15-181-20091-00-00
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

COMPANY: GOODLAND GAS COMPANY LEASE: Schwendener WELL NO.: 1-36

COUNTY: Sherman LOCATION: SW 1/4, NE 1/4, SE 1/4 SECTION: 36 TWP: 7S RNG: 39W ACRES:

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: 8-13-80 PLUG BACK TOTAL DEPTH: 1000 PACKER SET AT:

CASING SIZE: 2-7/8" WT. I.D. SET AT 999 PERF. 940 TO 980

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

TYPE COMPLETION (Describe): Frac 40,000# Sd., 20,000 gal 70 quality foam TYPE FLUID PRODUCTION: Gas

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

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

VERTICAL DEPTH (ft): TYPE METER CONN.: Positive Displacement Meter (METER RUN)(PROVER) SIZE:

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 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	CASENO WELL-HEAD PRESS		TUBING WELL-HEAD PRESS		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w)(P _i)(P _c) psia	psig	(P _w)(P _i)(P _c) psia		
SHUT-IN	--	--	--	--	--	31	44.2	--	--	72	--
FLOW	--	--	--	--	--	12	25.2	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _d) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \cdot h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
--	--	--	--	--	--	15	--	--

(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
1.779	1.319	1.349	0.130	0.718	0.093	1.240	19

OPEN FLOW 19 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

DEC 5 1986

Checked by DEC 1 1986