

15-181-20097-00-00
STATE OF KANSAS - CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM O-2
6-7-58

82
2-386

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

COMPANY: GOODLAND GAS COMPANY LEASE: Nemechek WELL NO.: 1-3

COUNTY: Sherman LOCATION: SW 1/4, NE 1/4, NW 1/4 SECTION: 3 TWP: 8S RNO: 39W ACRES:

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: 8-27-80 PLUG BACK TOTAL DEPTH: 1037 PACKER SET AT: None

CASINO SIZE: 4 1/2" WT. I.D. SET AT: 1037 PERF.: 964 TO: 1000

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

TYPE COMPLETION (Describe): TYPE FLUID PRODUCTION: Gas

Erac 40,000# Sc 20,000 gal 70 quality foam

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: BAR. PRESS - P_a: 13.2 ~~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 5-27 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	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	--	--	--	--	--	25.5	38.7	--	--	72	--
FLOW	0.375	--	--	72	--	22.8	36	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (P _c) ² / Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION √P _{mshw}	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
28.4	--	--	1.3089	0.9840	1.0013	16	--	--

(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 = _____

(P _c) ² - (P _w) ² or (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
1.323	0.202	6.562	0.817	0.718	0.587	3.860	62

OPEN FLOW 62 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

DEC 1 1986 Checked by _____