

15-181-20238-00-00
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: 5-29-87

COMPANY: Goodland Gas Co. LEASE: Armstrong WELL NO.: 1-11

COUNTY: Sherman LOCATION: C NW NW SECTION: 11 TWP: 8 RNG: 39 W ACRES:

FIELD: Goodland Gas RESERVOIR: Niobrara Chalk PIPELINE CONNECTION: K N ENERGY

COMPLETION DATE: 2-10-83 PLUG BACK TOTAL DEPTH: Packer set at:

CASING SIZE WT. I.D. SET AT PERF. TO

TUBING SIZE WT. I.D. SET AT PERF. TO

TYPE COMPLETION (Describe): TYPE FLUID PRODUCTION:

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

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

VERTICAL DEPTH (H): TYPE METER CONN.: F (METER RUN) (PROVER) SIZE: 2

SHUT-IN PRESSURE: SHUT IN 19 AT (AM)(PM) TAKEN 19 AT (AM)(PM)
 FLOW TEST: STARTED 19 AT (AM)(PM) TAKEN 19 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	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						23.0	37.4				
FLOW	.250	14.4	42.8	60		16.1	30.5				

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _p)(F _d) Mofd	(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 Mofd	GOR	G _m
.3067	28.8	35.11	1.31	1.0	1.011	14.26		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 1398.76 (P_w)² = 930.25 P_d² = _____ % (P_c - 14.4) + 14.4 = _____ (P_a)² = 0.207 (P_d)² = _____

$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 \cdot P_a^2}{P_c^2 \cdot P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mofd
1191.40	468.57	2.543	.4053	.893	.3619	2.301	32.81

OPEN FLOW 33 Mofd @ 14.65 psia DELIVERABILITY Mofd @ 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 _____ day of _____, 1987.

Witness (if any)
 Dale F. Balthazor
 For Commission

RECEIVED
 STATE CORPORATION COMMISSION
 JUN 12 1987
 For Company
 CONSERVATION DIVISION
 Checked by
 Wichita, Kansas