

15-181-20268-00-00
STATE OF KANSAS - CORPORATION COMMISSION
 ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
8-7-58

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

COMPANY: GOODLAND GAS COMPANY LEASE: Armstrong WELL NO.: 1-12A

COUNTY: Sherman LOCATION: SW^{1/4}, NW^{1/4} SECTION: 12 TWP: 8S RNO: 40W ACRES: _____

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: _____ PLUG BACK TOTAL DEPTH: _____ PACKER SET AT: None

CASINO SIZE: 4 1/2" WT. 9.5#/ft. L.D. _____ SET AT 1301 PERF. 1163 TO 1190

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

TYPE COMPLETION (Describe): Frac 82,600# Sd., 631 Bbls H₂O TYPE FLUID PRODUCTION: Gas

PRODUCING THRU: Casing RESERVOIR TEMPERATURE F: _____ BAR. PRESS - P_a: 13.2 XXX Psia

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

VERTICAL DEPTH (M): _____ 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 _c) psia	psig	(P _w)(P _c) psia		
SHUT-IN	--	--	--	--	--	34.5	47.7	--	--	72	--
FLOW	0.750	--	--	66	--	17.8	31	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _p)(F _d) / Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION √P _{ra} h _w	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
115.1	--	--	1.3089	0.9943	1.0010	130	--	--

(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	$\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
				0.500	0.102	1.264	164
2.101	1.314	1.599	0.204	1.000	0.204	1.599	208

OPEN FLOW 164-208 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)

Rec'd
12-5-86
5:00 PM

Checked by

For Commission

SFC 1