

15-181-20127-00-00
 STATE OF KANSAS - CORPORATION COMMISSION
 ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM 0-2
 8-7-58
 12-3-86

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

COMPANY: GOODLAND GAS COMPANY LEASE: Cebula WELL NO.: 1-15

COUNTY: Sherman LOCATION: SW $\frac{1}{4}$, SW $\frac{1}{4}$, NW $\frac{1}{4}$ SECTION: 15 TWP: 8S RNG: 39W ACRES:

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: 4-25-82 PLUG BACK TOTAL DEPTH: 1010 PACKER SET AT: None

CASING SIZE: 2-3/8" WT.: 4.7#/ft LD.: SET AT: 993 PERF.: 934 TO: 954

TUBING SIZE: None WT.: LD.: SET AT: PERF.: TO:

TYPE COMPLETION (Describe): Frac 40,000# Sd. TYPE FLUID PRODUCTION: 16,000 gal H₂O, 300 MCF CO₂, Gas

PRODUCING THRU: Casing RESERVOIR TEMPERATURE: F BAR. PRESS - P_a: 13.2XXXX psia

GAS GRAVITY - G_s: 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 5-18 86 AT (AM)(PM) TAKEN 5-30 86 AT (AM)(PM)

FLOW TEST: STARTED 5-30 86 AT (AM)(PM) TAKEN 6-2 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	CASING 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	--	--	--	--	--	19	32.2	--	--	72+	--
FLOW	0.500	--	--	73	--	9.8	23	--	--	72	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _d) Mcd	(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 Mcd	GOR	Q _m
50.5	--	--	1.3089	0.9877	1.0005	8	--	--

(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 = _____

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcd
0.863	0.508	1.699	0.230	1.000	0.230	1.699	14

OPEN FLOW 14 Mcd @ 14.65 psia DELIVERABILITY Mcd @ 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.

 Witness (if any)

 For Commission

 For Company

Checked by _____

DEC 5 1986