

15-181-20096-00-00
 STATE OF KANSAS - CORPORATION COMMISSION
 ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

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

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

COMPANY: GOODLAND GAS COMPANY LEASE: Wiggins WELL NO.: 1-1

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

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KN Energy

COMPLETION DATE: 8-13-80 PLUG BACK TOTAL DEPTH: 1015 PACKER SET AT: None

CASING SIZE: 4 1/2" WT. I.D. SET AT: 1015 PERF. TO: 948

TUBING SIZE: None WT. I.D. SET AT: 1015 PERF. TO: 988

TYPE COMPLETION (Describe): Frac 40,000# sd, 1 1/4 MCF No. 20,000 gal TYPE FLUID PRODUCTION: Gas

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: [blank]

VERTICAL DEPTH (H): [blank] TYPE METER CONN.: Orifice (METER RUN) (METER) 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	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	--	--	--	--	--	26	39.2	--	--	72	--
FLOW	0.500	--	--	71	--	18.8	32	--	--	72	--

COEFFICIENT (F _p)(F _d) Mofd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \times h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mofd	GOR	G _m
50.5	--	--	1.3089	0.9896	1.0011	42	--	--

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = _____ (P_w)² = _____ P_d = _____ % (P_c - 14.4) + 14.4 = _____ (P_d)² = 0.207

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	(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 Mofd
1.362	0.513	2.658	0.424	0.718	0.305	2.017	85

OPEN FLOW 85 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 25th day of NOV, 1986.

Witness (if any) _____ For Commission _____

Robert W. Richardson
 For Company

DEC 5 1986

Checked by _____
 DEC 1 1986