

15-181-20133-00-00

STATE OF KANSAS - CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM O-2
8-7-58
29
6-12-89

TYPE TEST: Deliverability Open Flow TEST DATE: Flow Test 6-2-87

COMPANY: GOODLAND GAS COMPANY LEASE: Glasco WELL NO.: 2-6

COUNTY: Sherman LOCATION: SW 1/4 SW 1/4 NW 1/4 SECTION: 6 TWP: 8S R9G: 38W ACRES:

FIELD: Goodland RESERVOIR: Niobrara PIPELINE CONNECTION: KNEnergy

COMPLETION DATE: 8-30-80 PLUG BACK TOTAL DEPTH: 983' PACKER SET AT: None

CASING SIZE: 4 1/2" WT. I.D. SET AT: 903' PERF. TO: None

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

TYPE COMPLETION (Describe): Open Hole TYPE FLUID PRODUCTION: Gas

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

GAS GRAVITY - G_g: 0.5827 % CARBON DIOXIDE: 1.28 % NITROGEN: 2.635 API GRAVITY OF LIQUID:

VERTICAL DEPTH (ft): TYPE METER CONN.: Orifice-Flange (METER RUN)(PROVER) SIZE: 2.067

SHUT-IN PRESSURE: SHUT IN 5-29 19 87 AT 1:50 (AM)(PM) TAKEN 6-1 19 87 AT 11:39 (AM)(PM) TAKEN
FLOW TEST: STARTED 6-1 19 87 AT 11:42 (AM)(PM) TAKEN 6-2 19 87 AT 11:22 (AM)(PM) TAKEN

OBSERVED DATA DURATION OF SHUT-IN 72 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	--	--	--	--	--	40.6	55.0	--	--	72	--
FLOW	0.750	21.9	1.58	60	--	22.0	36.4	--	--	24	--

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _v) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	Q _{gas}
115.14	36.3	7.57	1.31	1.00	1.0005	27	--	--

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 3025.00 ; (P_w)² = 1324.96 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_w)² = 0.207 ; (P_d)² = _____

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
2817.64	1700.04	1.66	0.22	0.718	0.16	1.44	39

OPEN FLOW 38 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 4 day of June, 1987

[Signature]
For Company
Wichita, Kansas

Witness (if any)

For Commission

Checked by