

STATE OF KANSAS - CORPORATION COMMISSION

FORM O-2
8-7-58

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

15-103-20200-0000

TYPE TEST: Deliverability Open Flow TEST DATE: April 5, 1990

COMPANY: Fairway Petroleum, Inc. LEASE: Chapman WELL NO.: 1

COUNTY: Leavenworth LOCATION: NW 1/4 SECTION: 25 TWP: 7S RNG: 21E ACRES: 40

FIELD: McLouth PIPELINE CONNECTION: LAGGS, INC.

COMPLETION DATE: 3/11/83 PLUG BACK TOTAL DEPTH: 1429 PACKER SET AT:

CASING SIZE: WT. 9.5 L.D. 4 1/2" SET AT 1429 PERF. 1369-1378 & 1386-1388 TO

TUBING SIZE: WT. 2 3/8" L.D. 2 3/8" SET AT 1410 PERF. TO

TYPE COMPLETION (Describe): Perforation TYPE FLUID PRODUCTION: Oil

PRODUCING THRU: 2 3/8" Tubing RESERVOIR TEMPERATURE F: 79° BAR. PRESS - P_a: 14.4 Psia

GAS GRAVITY - G_g: 0.5912 % CARBON DIOXIDE: 0 % NITROGEN: 8.2 API GRAVITY OF LIQUID: 19.5

VERTICAL DEPTH (H): 1429 TYPE METER CONN.: None (METER RUN)(PROVER) SIZE: 2"

SHUT-IN PRESSURE: SHUT IN April 3, 1990 19 AT (AM)(PM) TAKEN 19 AT (AM)(PM)
FLOW TEST: STARTED April 3, 1990 19 AT (AM)(PM) TAKEN 19 AT (AM)(PM)

OBSERVED DATA

DURATION OF SHUT-IN ^{Years} 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						140	154.4			Years	
FLOW	.50	37	----	79	79	37	51.4			1	

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _p) / Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_{mshw}}$	GRAVITY FACTOR F _g	FLOWING TEMP. F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R / Mcfd	GOR	G _m
4.388	51.4	-----	1.3142	0.9816	1.0045	292.3		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 23.8 ; (P_w)² = 2.6 ; P_d² = _____ % (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 Mcfd
	21.2			0.85			321.6

OPEN FLOW 321.6 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 12 day of May, 1990.

Geoffrey M. Husted
F_g Company

Witness (if any)

Checked by