

15-103-20677-00-00  
**STATE OF KANSAS - CORPORATION COMMISSION**

FORM O-2  
 8-7-58

DJ  
 5-23-89

**ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST**

**TYPE TEST:**  Deliverability  Open Flow **TEST DATE:** April 20, 1989

**COMPANY:** Fairway Petroleum, Inc. **LEASE:** Ryan **WELL NO.:** 4

**COUNTY:** Leavenworth **LOCATION:** NE **SECTION:** 33 **TWP:** 8S **RNG:** 22E **ACRES:** 27

**FIELD:** McLouth **RESERVOIR:** McLouth **PIPELINE CONNECTION:** LAGGS Inc.

**COMPLETION DATE:** 7/12/86 **PLUG BACK TOTAL DEPTH:** 1250 Est. **PACKER SET AT:**

**CASING SIZE:** WT. I.D. SET AT PERF. TO  
 4 1/2" 1250 Est. 1195 1202

**TUBING SIZE:** WT. I.D. SET AT PERF. TO

**TYPE COMPLETION (Describe):** Perforation **TYPE FLUID PRODUCTION:** Water

**PRODUCING THRU:** 4 1/2" Casing **RESERVOIR TEMPERATURE F:** 76° **BAR. PRESS - P<sub>a</sub>:** 14.4 Psia

**GAS GRAVITY - G<sub>g</sub>:** 0.5843 **% CARBON DIOXIDE:** N.A. **% NITROGEN:** N.A. **API GRAVITY OF LIQUID:**

**VERTICAL DEPTH (H):** 1250 **TYPE WTER CONN.:** Flange **(METER RUN)(PROVER) SIZE:** 2"

**SHUT-IN PRESSURE:** SHUT IN April 12, 1989 19 AT (AM)(PM) TAKEN 19 AT (AM)(PM)

**FLOW TEST:** STARTED April 20, 1989 19 AT (AM)(PM) TAKEN 19 AT (AM)(PM)

**OBSERVED DATA**

DURATION OF SHUT-IN 24 HR.

SHUT-IN OR FLOW	ORIFICE SIZE In.	(METER) (PROVER) PRESSURE psig	DIFF. In. (h <sub>w</sub> Xh <sub>d</sub> )	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASED WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P <sub>w</sub> X P <sub>i</sub> X P <sub>c</sub> ) psia	psig	(P <sub>w</sub> )(P <sub>i</sub> X P <sub>c</sub> ) psia		
SHUT-IN						124	138.4			24	
FLOW	1.25	47	5.5	76.0	76.0	98	112.4			24	

**RATE OF FLOW CALCULATIONS**

COEFFICIENT (F <sub>p</sub> )(V <sub>a</sub> ) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP. FACTOR F <sub>L</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R Mcfd	REGULATORY COMMISSION
8.329	61.4	18.4	1.2982	0.9843	1.005	196.8	MAY 22 1989 CONSERVATION DIVISION Wichita Kansas

**(OPEN FLOW) (DELIVERABILITY) CALCULATIONS**

(P<sub>c</sub>)<sup>2</sup> = 19.1 ; (P<sub>w</sub>)<sup>2</sup> = 12.6 ; P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>w</sub>)<sup>2</sup> = 0.207 ; (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

$\frac{(P_c)^2 - (P_d)^2}{(P_c)^2 - (P_w)^2}$	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	$\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
	6.5			0.85			567

**OPEN FLOW:** 567 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 20 day of April, 1989

*[Signature]*  
 For Company

Witness (if any)

Checked by