

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

FORM O-2  
8-7-58

15-005-20041-0005

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

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**COMPANY:** Fairway Petroleum, Inc.      **LEASE:** Perdue      **WELL NO.:** 111

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**COUNTY:** Atchison      **LOCATION:** SW NW NE      **SECTION:** 24      **TWP:** 7S      **RNG:** 21E      **ACRES:** 40

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

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**COMPLETION DATE:** 9/30/84      **PLUG BACK TOTAL DEPTH:** 1418      **PACKER SET AT:**

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**CASING SIZE:** WT. 4 1/2"      L.D. 1418      SET AT 1418      PERF. 1379      TO 1385

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

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

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**PRODUCING THRU:** 4 1/2" Casing      **RESERVOIR TEMPERATURE F:** 80°      **BAR. PRESS - P<sub>a</sub>:** 14.4 Psia

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**GAS GRAVITY - G<sub>g</sub>:** 0.5745      **% CARBON DIOXIDE:** 0      **% NITROGEN:** 4.8      **API GRAVITY OF LIQUID:**

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**VERTICAL DEPTH (H):** 1418      **TYPE METER CONN.:** none      **(METER RUN)(PROVER) SIZE:** 2"

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

**FLOW TEST:** STARTED April 19, 1989 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 <sub>w</sub> Xh <sub>d</sub> )	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASED WELL-HEAD PRESS.		TUBING WELL-HEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P <sub>w</sub> )(P <sub>i</sub> )(P <sub>c</sub> ) psia	psig	(P <sub>w</sub> )(P <sub>i</sub> )(P <sub>c</sub> ) psia		
SHUT-IN						364	378.4			Years	
FLOW	.50	243	--	80	80	243	257.4			1	

**RATE OF FLOW CALCULATIONS**

COEFFICIENT (F <sub>o</sub> )(P <sub>w</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	RECEIVED STATE CORPORATION COMMISSION MAY 22 1989 CONSERVATION DIVISION Wichita, Kansas
4.388	257.4	--	1.3193	0.9807	1.0045	1,468	

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

(P<sub>c</sub>)<sup>2</sup> = 143.2      (P<sub>w</sub>)<sup>2</sup> = 66.3      P<sub>d</sub> = \_\_\_\_\_ %      (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_      (P<sub>c</sub>)<sup>2</sup> = 0.207      (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\left[ \frac{P_c^2 - P_w^2}{P_c^2 - P_d^2} \right]$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
	76.9			0.85			2,679

**OPEN FLOW** 2,679 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.

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For Company

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Witness (if any)

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Checked by