

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

15-005-20068-0580
 FORM O-2
 8-7-58

TYPE TEST: Deliverability Open Flow **TEST DATE:** 9/16/89

COMPANY: Theodore I. Leben & Associates **LEASE:** Sheeley "A" **WELL NO.:** 1-35

COUNTY: Atchison **LOCATION:** NW SE SE/4 **SECTION:** 35 **TWP:** 6S **RNG:** 18E **ACRES:**

FIELD: Wildcat **RESERVOIR:** U. McLouth **PIPELINE CONNECTION:** Atchison Pipeline Co.

COMPLETION DATE: 7/7/89 **PLUG BACK TOTAL DEPTH:** 1755 **PACKER SET AT:**

CASINO SIZE	WT.	I.D.	SET AT	PERF.	TO
4 1/2"	10.5#		1848'	1733'	1753'
TUBING SIZE	WT.	I.D.	SET AT	PERF.	TO
2 3/8"	4.7#		1754'		

TYPE COMPLETION (Describe): Single Gas **TYPE FLUID PRODUCTION:** Gas

PRODUCING THRU: Tubing **RESERVOIR TEMPERATURE F:** 97°F **BAR. PRESS - P_a:** 14.4 Psia

GAS GRAVITY - G_g: 0.581 **% CARBON DIOXIDE:** 0.91 **% NITROGEN:** 3.37 **API GRAVITY OF LIQUID:**

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

SHUT-IN PRESSURE: SHUT IN 8/26 19 89 AT 8:00 (AM)(PM) TAKEN 8/29 1989 AT 8:00 (AM)(PM)

FLOW TEST: STARTED 9/15 19 89 AT 8:00 (AM)(PM) TAKEN 9/16 19 89 AT 8:00 (AM)(PM)

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	CASINO WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w)(P _c)(P _e) psia	psig	(P _w)(P _c)(P _e) psia		
SHUT-IN						526	540.4				
FLOW	1.500	290	68	65		492	506.4	452	466.4	24.0	

RATE OF FLOW CALCULATIONS

COEFFICIENT (F ₁)(F ₂) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION √P _m h _w	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	STATE RECEIVED
13.09	304.4	143.87	1.312	0.9952	1.019	2505	6 1989

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 292,032 ; (P_w)² = 256,440 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_c)² = 0.207 ; (P_d)² = 0.207

(P _c) ² - (P _d) ² or (P _c) ² - (P _w) ²	(P _c) ² - (P _w) ²	$\frac{(P_c^2 - P_d^2)}{(P_c^2 - P_w^2)}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
291,825	35,591	8.2	0.9138	0.866	0.7914	6.18	15,494

OPEN FLOW 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 2nd day of October, 1989.

[Signature]
 For Company
 Checked by

Witness (if any)