

STATE OF KANSAS - CORPORATION COMMISSION

FORM O-2  
8-7-58

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST 15-005-20048-0000

TYPE TEST:  Deliverability  Open Flow TEST DATE: 9/15/89

COMPANY: Theodore I. Leben & Associates LEASE: Gigstad WELL NO.: #1

COUNTY: Atchison LOCATION: SW/4 SW/4 SECTION: 1 TWP: 7S RNG: 18E ACRES:

FIELD: Wehking RESERVOIR: Lower McLouth PIPELINE CONNECTION: Atchison Pipeline Co.

COMPLETION DATE: 11/17/87 PLUG BACK TOTAL DEPTH: 1814 PACKER SET AT:

CASINO SIZE: 4 1/2" WT.: 10.5# I.D.: SET AT: 1848 PERF.: 1760 TO: 1764

TUBING SIZE: 2 3/8" WT.: 4.7# I.D.: SET AT: 1730 PERF.: TO:

TYPE COMPLETION (Describe): Single Gas TYPE FLUID PRODUCTION: None

PRODUCING THRU: Tubing RESERVOIR TEMPERATURE F: BAR. PRESS - P<sub>a</sub>: 14.4 Psia

GAS GRAVITY - G<sub>g</sub>: 0.590 % CARBON DIOXIDE: 0.36 % NITROGEN: 6.08 API GRAVITY OF LIQUID:

VERTICAL DEPTH (H): 1762 TYPE METER CONN.: Flange/Down (METER RUN)(PROVER) SIZE: 2.067

SHUT-IN PRESSURE: SHUT IN 19 8/7 AT 8:30 (AM)(PM) TAKEN 9/14 19 89 AT 5:25 (AM)(PM) TAKEN 9/15 19 89 AT 5:25 (AM)(PM) TAKEN

OBSERVED DATA

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h <sub>w</sub> )(h <sub>d</sub> )	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASINO WELLHEAD PRESS.		TUBING WELLHEAD 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						361.	375.4			456	
FLOW	1.00	265	4	68		306	320.4	276	290.4	24	

RATE OF FLOW CALCULATIONS

COEFFICIENT (F <sub>1</sub> )(F <sub>2</sub> ) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m h_w}$	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP. F <sub>L</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R Mcfd	GOR	RECEIVED CORPORATION COMMISSION OCT 6 1989 OIL DIVISION
5.073	279.4	33.43	1.302	0.9924	1.019	223		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 140,925 ; (P<sub>w</sub>)<sup>2</sup> = 102,656 ; P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>d</sub>)<sup>2</sup> = 0.207

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
140,718	38,269	3.68	0.5658	1.00	0.5658	3.68	820

OPEN FLOW 2431 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, 19 89  
 Witness (if any) \_\_\_\_\_  
 \_\_\_\_\_ For Company  
 Checked by \_\_\_\_\_