

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

FORM 0-3
 8-7-58

9.4.89

15-005-20048-0000

TYPE TEST: Deliverability Open Flow TEST DATE: 9/3/88

COMPANY: Theodore 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:

CASING SIZE: 4 1/2" WT.: 10.5# LD.: 1848 SET AT: 1760 PERF.: 1764 TO:

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

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

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

GAS GRAVITY - G_g: 0.589 % CARBON DIOXIDE: 0.21 % NITROGEN: 6.66 API GRAVITY OF LIQUID:

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

SHUT-IN PRESSURE: SHUT IN 9/3 1988 AT 8:30 (AM)(PM) TAKEN 9/6 1988 AT 8:30 (AM)(PM)

FLOW TEST: STARTED 9/2 1988 AT 4:00 (AM)(PM) TAKEN 9/3 1988 AT 4:00 (AM)(PM)

OBSERVED DATA DURATION OF SHUT-IN: HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVOKER) 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 _c)(P _e) psia	psig	(P _w)(P _c)(P _e) psia		
SHUT-IN						516.3	530.7	502.3	516.7	72	RECEIVED
FLOW	0.750	265	75	74		455.2	469.6			24	STATE CORPORATION COMMISSION

RATE OF FLOW CALCULATIONS

COEFFICIENT (P _e)(P _w) / Mcfd	(METER) (PROVOKER) PRESSURE psia	EX.ENSION $\sqrt{P_{mshw}}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	CONSERVATION DIVISION Wichita, Kansas Q _m
2.778	279.4	144.8	1.3030	0.9868	1.0208	528		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 281.642 ; (P_w)² = 220.524 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_e)² = 0.207 ; (P_d)² = _____

$\frac{(P_e)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]$	LOG []	"a"	a x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
281.435	61.118	4.605	0.6632	1.0000	0.6632	4.605	2431

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 5th day of July, 1989

Petroleum Science Corporation
 600 Commerce Plaza
 7300 West 110th Street
 Overland Park, KS 66210

Ronald Blum (consultant)
 For Company

Checked by _____

Witness (if any)

For Commission