

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

FORM O-2
 8-7-59

TYPE TEST: Deliverability Open Flow TEST DATE: 05/09/86 15-119-20654-00-00

COMPANY: Zinke & Trumbo, Ltd. LEASE: Ediger WELL NO.: #116

COUNTY: Meade LOCATION: NE/NE SECTION: 6 TWP: 35S RND: 26W ACRES: .

FIELD: Fincham/O'Brien-Barby RESERVOIR: Morrow PIPELINE CONNECTION: Northern Natural Gas

COMPLETION DATE: 6/7/84 PLUG LACK TOTAL DEPTH: 6245' PACKER SET AT: 5835'

CASING SIZE: 4-1/2" WT. 10.5# LD. SET AT 6299' PERV. TO 5895' to 5926'

TUBING SIZE: 2-3/8" WT. 4.7# LD. SET AT 5835' PERV. TO

TYPE COMPLETION (Describe): Single (gas) TYPE FLUID PRODUCTION: Condensate

PRODUCING THRU: Tubing RESERVOIR TEMPERATURE: 146° @ 5911' BAR. PRESS - P_a: 14.4 Psia

GAS GRAVITY - G_g: .7146 % CARBON DIOXIDE: .51 % NITROGEN: 3.37 API GRAVITY OF LIQUID: 69.5

VERTICAL DEPTH (H): 5911 TYPE METER CONN.: Flange (METER RUN)(PROVER) SIZE: 2"

SHUT-IN PRESSURE: SHUT IN 5/6 19.86 AT 1:00 (AM) (PM) TAKEN 5/9 19.86 AT 1:00 (AM) (PM)

FLOW TEST: STARTED 5/2 19.86 AT 1:00 (AM) (PM) TAKEN 5/6 19.86 AT 1:00 (AM) (PM)

OBSERVED DATA

DURATION OF SHUT-IN _____ HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) PRESSURE psig	DIFF. in. (h _{wp})(h _g)	FLOWING TEMP. t	WELL-HEAD TEMP. t	CUMUL WELHEAD PRESS.		TUBING WELHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w)(P _i)(P _c) psia	psig	(P _w)(P _i)(P _c) psia		
SHUT-IN						Packer		1465		72	
FLOW	1.250	48.3	24	79		Packer		889		120	20

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _L)(F _a) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_{w} \times h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
8.329	497.4	109.26	1.183	.9822	1.057	1118	56	.7057

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 2188.6 ; (P_w)² = 816.1 ; F_g = 60.7 % ; (P_c - 14.4) + 14.4 = 1479.4 ; (P_w)² = 0.207 ; (P_d)² =

$\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	LOG []	"n"	"n" x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R = ANTILOG Mcfd
2188.4	1372.3	1.594695	.2026776	.688	.1394422	1.3786125	1541

OPEN FLOW 1541 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 12th day of May, 1986

Daniel E. P...
 For Company

Witness (if any)

Checked by

CROWN CONSULTING, INC.

For Drilling & Completion Reports, Workover Jobs and Additional Information on Well

Company: Zinke & Trumbo, LTD Well: EDIGER #1-67 County: Meade Co., KS

Date	Time	Detail Work Done
6/9/84	(cont)	In 5 minutes, SITP 1225# - In 10 minutes, SITP 1475# - In 15 minutes, SITP 1595# - Lack 25 BHLR - Shut in waiting on initial test - DC \$3000 TC \$16,405
6/11/84		36 hours after shut in, (SITP 1750#)
6/13/84		<p>SITP 1716# - Opened well for 4-point test -</p> <p>At end of 1st rate, FTP 1576# on 11/64" choke - Venting 543 mcf/d</p> <p>At end of 2nd rate, FTP 1429# on 13/64" choke - Venting 845 mcf/d - Made 1/4 BF</p> <p>At end of 3rd rate, FTP 1236# on 14/64" choke - Venting 1179 mcf/d - Made 1/2 BF</p> <p>At end of 4th rate, FTP 1015# on 16/64" choke - Venting 1429 mcf/d - Made 1/2 BF</p> <p>Left well on 1-point test by Northern Natural's request -</p> <p>WHOFP 1,900 mcf/d - Water sample: Sp Gr 1.035 - Chl 29,773 - Trace of condensate</p>
6/14/84		<p>Took well off of 1-point test - At end of 1-point, FTP 1022# - Venting 1,400 mcf/d - Estimated 3-5 barrels condensate/day - Shut well in</p> <p>15 minutes after shut in, SITP 1535#</p> <p>30 minutes after shut in, SITP 1600#</p> <p>45 minutes after shut in, SITP 1619#</p> <p>60 minutes after shut in, (SITP 1632#)</p> <p>Estimated WHOFP 1,900 mcf/d - Water analysis: Formation water - Sp Gr 1.045 - Ph 7 - Chl 38,200 ppm - Iron 1050 ppm</p>