

X C. KCC. TKS. CTY. LMC - West - MCP

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

FORM O-2
8-7-58

15-119-20248-0000
p 10
7-25-80

TYPE TEST: Deliverability Open Flow TEST DATE: 4-21-80

COMPANY: Mesa Petroleum Co LEASE: Barragree WELL NO.: 1-25

COUNTY: Meade LOCATION: SECTION: 25 TWP: 45 34 R1G: 29W ACRES: ANB 100

FIELD: MORROW RESERVOIR: Morrow PIPELINE CONNECTION: KP&L

COMPLETION DATE: PLUG BACK TOTAL DEPTH: 5988-6082 PACKER SET AT: 5988-6082

CASING SIZE: 5 1/2 WT.: I.D.: SET AT: 6379 PERF.: 5924 TO: 5960

TUBING SIZE: 1-1/4 WT.: 2.4 I.D.: 1.380 SET AT: 5850 PERF.: TO:

TYPE COMPLETION (Describe): Triple (Gas) TYPE FLUID PRODUCTION:

PRODUCING THRU: Tubing RESERVOIR TEMPERATURE F: 127 BAR. PRESS - P_a: 14.4 Psia

GAS GRAVITY - G_g: .692 % CARBON DIOXIDE: % NITROGEN: API GRAVITY OF LIQUID:

VERTICAL DEPTH (H): 5850 TYPE METER CONN.: Pipe (METER RUN)(PROVER) SIZE: 4.026

SHUT-IN PRESSURE: SHUT IN 4-19-80 19 80 AT 8:00 (AM) TAKEN 4-21- 19 80 AT 11:00 (AM)

FLOW TEST: STARTED 4-21- 19 80 AT 11:00 (AM) TAKEN 4-22- 19 80 AT 9:00 (AM)

OBSERVED DATA DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) 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 _f)(P _c) psia	psig	(P _w)(P _f)(P _c) psia		
SHUT-IN								312	326.4	72	-0-
FLOW	.750	154	2	60				161	175.4	24	-0-

Pcr 670 Tcr 378 RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _d) Mcfd	(METER) PRESSURE psia	EXTENSION √P _m zh _w	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
2.793	168.4	18.35	1.202	1.000	1.019			

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 106.5 ; (P_w)² = 31.4 ; P_d = % (P_c - 14.4) + 14.4 (P_d)² = 0.207

(P _c) ² - (P _a) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	$\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
106.3	75.1	1.4154	1.509	.810	.1222	1.3250	83

OPEN FLOW 83 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 2 day of May 1980

Morris E. Thurmond-McGlothlin, Inc.
For Company

Witness (if any)

Checked by

XC: KCC - MCP
 T & S - Gathers
 CTY
 h m c
 Asat

WORK SHEET FOR CALCULATING EQUIVALENT STATIC WELLHEAD PRESSURE

LEASE Barragree WELL NO. 1-25 FIELD _____ COUNTY Meade DATE 4-21-80

% CO₂ _____ Q_m .692 P_{or} 668 T_{or} 395 FLOW STRING 1-1/4

% N₂ _____ H 5850 Q_mH 4048 L/H 1.000 I.D. 1.380

RATE									
LINE	TRIAL								
1	Q _m , M ³ /d	.063							
2	T _w	520							
3	T _g	587							
4	T _g	554							
5	Z _g	.964							
5a	T _g Z _g	533.6							
6	Q _m H/T _g Z _g	7.587							
7	e ^s	1.329							
8	(1 - e ^{-s})	.248							
9	P _i or P _o	175.4							
10	P _i ² or P _o ² (thous.)	30.8							
11	F _o	25.13							
12	F ₁ = F _o T _g Z _g / 540	24.83							
13	F ₁ Q _m	1.564							
14	Y = (F ₁ Q _m) ² L/H	2.447							
15	R ² = Y (1 - e ^{-s})	.60							
16	P _w ² = P _i ² + R ²	31.4							
17	P _s ² = e ^s P _w ² (thous.)	41.7							
17a	^{or} P _i ² = e ^s P _o ² (thous.)								
18	P _s or P _i	204.1							
19	P _s	189.8							
20	P _r	.28							
21	T _r	1.40							
22	Z _g	.964							

RECEIVED
 STATE CORPORATION COMMISSION
 JUL 25 1980
 CONSERVATION DIVISION
 WICHITA, KANSAS