

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

FORM 8-2
8-7-58
15-119-20248-0000

TYPE TEST: Deliverability Open Flow TEST DATE: 10-8-80

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

COUNTY: Meade LOCATION: SECTION 25 TWP 34 4S RNG 29W ACRES ANB 100

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

COMPLETION DATE: PLUG BACK TOTAL DEPTH: Packer Set at 5988-6082

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

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: .706 % CARBON DIOXIDE: % NITROGEN: API GRAVITY OF LIQUID:

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

SHUT-IN PRESSURE: SHUT IN 10-5 1980 AT 8:00 (AM/PM) TAKEN 10-8-1980 AT 11:00 (AM/PM)

FLOW TEST: STARTED 10-8 1980 AT 11:00 (AM/PM) TAKEN 10-9-1980 AT 9:00 (AM/PM)

OBSERVED DATA DURATION OF SHUT-IN 72 HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (FLOWER) 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 _i)(P _c) psia	psig	(P _w)(P _i)(P _c) psia		
SHUT-IN								320	334.4	72	=0-
FLOW	.750	163	2	60				164	177.4	24	-0-

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _d) Mcfd	(METER) (FLOWER) PRESSURE psia	EXTENSION $\sqrt{P_m z h w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd
2.793	177.4	18.84	1.190	1.000	1.021	64

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(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 111.8 ; (P_w)² = 32.1 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_a)² = 0.207 ; (P_d)² = _____

$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$	$(P_c)^2 - (P_w)^2$	$\left[\frac{P_c^2 - P_a^2}{P_c^2 - P_d^2} \right]$	LOG []	"n"	n x LOG []	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
111.6	79.7	1.4003	.146206	.810	.118427	1.3135	84

OPEN FLOW 84 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 21 day of October 1980

 For Company

Witness (if any):

 For Commission

Checked by

WORK SHEET FOR CALCULATING EQUIVALENT STATIC WELLHEAD PRESSURE

LEASE Barragree WELL NO. 1-25 FIELD _____ COUNTY Meade DATE 10-8-80
 % CO₂ _____ Q_m .706 P_{or} 670 T_{or} 378 FLOW STRING 1 1/4
 % N₂ _____ H 5850 Q_{mH} 4130 L/H 1.000 I.D. 1.380

RATE													
LINE	TRIAL												
1	Q _m , M ³ /d	.064											
2	T _w	520											
3	T _s	587											
4	T _e	554											
5	Z _e	.964											
5a	T _e Z _e	533.6											
6	Q _m H / T _e Z _e	7.740											
7	e ^{-b}	1.336											
8	(1 - e ^{-b})	.252											
9	P _i or P _o	177.4											
10	P _i ² or P _o ² (thous.)	31.5											
11	F _o	25.13											
12	F _i = F _o T _e Z _e / 540	24.83											
13	F _i Q _m	1.59											
14	Y = (F _i Q _m) ² L/H	2.52											
15	R ² = Y (1 - e ^{-b})	.64											
16	P _w ² = P _i ² + R ²	32.1											
17	P _i ² = e ^b P _w ² (thous.)	42.9											
17a	^{or} P _i ² = e ^b P _o ² (thous.)												
18	P _s or P _f	207.1											
19	P _e	192.3											
20	P _r	.29											
21	T _r	1.40											
22	Z _e	.964											

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