

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

FORM O-2
 8-7-58

15-119-20248-0000
 11-9-79

TYPE TEST: Deliverability Open Flow TEST DATE: 10-17-79

COMPANY: Mesa Petroleum Co. LEASE: Barragree WELL NO.: 1-25
 COUNTY: Meade LOCATION: SECTION 25 TWP 34 AS RNG 29W ACRES ANB KCC
 FIELD: 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. 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 .700 % CARBON DIOXIDE % NITROGEN API GRAVITY OF LIQUID

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

SHUT-IN PRESSURE: SHUT IN 10-13 19 79 AT 8:00 (AM) (PM) TAKEN 10-17 19 79 AT 11:00 (AM) (PM)
 FLOW TEST: STARTED 10-17 19 79 AT 11:00 (AM) (PM) TAKEN 10-18 19 79 AT 9:00 (AM) (PM)

OBSERVED DATA

DURATION OF SHUT-IN _____ HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) (PROVER) 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 _t)(P _c) psia	psig	(P _w)(P _t)(P _c) psia		
SHUT-IN								328	342.4	72	
FLOW	.750	145	4	60			270	284.4	24		

P_{cr} 670 T_{cr} 378

RATE OF FLOW CALCULATIONS

COEFFICIENT (F _b)(F _d) Mcfd	(METER) (PROVER) PRESSURE psia	EXTENSION $\sqrt{P_m \cdot h_w}$	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _L	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _m
2.793	159.4	25.25	1.195	1.000	1.018	86		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 117.2 ; (P_w)² = 82 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_d)² = 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
117.0	35.2	3.3238	.52164	.810	.42253	2.6456	228

OPEN FLOW 228 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 30 day of October 19 79

Thurmond-McGlothlin, Inc.
 For Company

Witness (if any)

Checked by

WORK SHEET FOR CALCULATING EQUIVALENT STATIC WELLHEAD PRESSURE

LEASE Barragree WELL NO. 1-25 FIELD _____ COUNTY Meade DATE 10-16-79
 % CO₂ _____ G_m .700 P_{cr} 668 T_{cr} 395 FLOW STRING 1-1/4
 % N₂ _____ H 5850 G_{mH} 4095 L/H 1.000 I.D. 1.380

RATE

LINE	TRIAL									
1	Q _m , M ² c/d	.086								
2	T _w	520								
3	T _s	587								
4	T _o	554								
5	Z _o	.944								
5a	T _o Z _o	522.9								
6	G _m H/T _o Z _o	7.830								
7	••	1.341								
8	(1 - G [•])	.254								
9	P _t or P _c	284.4								
10	P _t or P _c ² (thous.)	80.9								
11	F _c	25.13								
12	F ₁ = F _c T _o Z _o / 540	24.34								
13	F ₁ Q _m	2.09								
14	Y = (F ₁ Q _m) ² L/H	4.38								
15	R ² = Y (1 - e ^{-Y})	1.11								
16	P _w ² = P _t ² + R ²	82.0								
17	P _s ² = e [•] P _w ² (thous.)	109.9								
17a	or P _f ² = e [•] P _c ² (thous.)									
18	P _o or P _f	331.7								
19	P _s	300.0								
20	P _r	.46								
21	T _r	1.40								
22	Z _o	.944								

RECEIVED
 NOV 05 1979
 CONSTRUCTION DIVISION
 STATE DEPARTMENT OF REVENUE
 HONOLULU, HAWAII