

10-24-78

15-119-20248-0000

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

FORM G-2
8-7-58

RECEIVED
AMARILLO PRODUCTION

TYPE TEST: Deliverability Open Flow TEST DATE: October 4, 1978

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

COUNTY: Meade LOCATION: SECTION 25 TWP: 48-34 R1G: 29W ACRES: 1.37

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.: 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: .684 % CARBON DIOXIDE: % NITROGEN: API GRAVITY OF LIQUID:

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

SHUT-IN PRESSURE: SHUT IN 10-1-78 AT 8:00 (AM)(PM) TAKEN 10-4 19 78 AT 9:30 (AM)(PM) TAKEN
FLOW TEST: STARTED 10-4 19 78 AT 9:30 (AM)(PM) TAKEN 10-5 19 78 AT 8:30 (AM)(PM) TAKEN

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 _t)(P _c) psia	psig	(P _w)(P _t)(P _c) psia		
SHUT-IN								393	407.4	72	
FLOW	1.250	173	6	60				176	190.4	24	6.0 oil

RATE OF FLOW CALCULATIONS

P_{cr} 670 T_{cr} 378

COEFFICIENT (F _h)(F _p) Mcfd	(METER) PRESSURE psia	EXTENSION √P _m h _w	GRAVITY FACTOR F _g	FLOWING TEMP. FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR CONCENTRATION DIVISION Tulsa, Kansas
8.134	187.4	33.53	1.209	1.000	1.019	336	56

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = 166.0 ; (P_w)² = 54.2 ; P_d = _____ % (P_c - 14.4) + 14.4 = _____ ; (P_w)² = 0.207 ; (P_d)² = _____

(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
165.8	111.8	1.4830	.171143	.810	.138626	1.3760	462

OPEN FLOW 462 Mcfd @ 14.65 psia DELIVERABILITY 462 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 9 day of October, 1978

Witness (if any)
For Commission

For Company
Checked by

WORK SHEET FOR CALCULATING EQUIVALENT STATIC WELLHEAD PRESSURE

LEASE Barragree WELL NO. 1-25 FIELD _____ COUNTY Meade DATE 10-4-78

% CO₂ _____ G_m .732 P_{cr} 668 T_{cr} 401 FLOW STRING 1-1/4

% N₂ _____ H 5850 G_{mH} 4282 L/H 1.000 I.D. 1.380

RATE									
LINE	TRIAL								
1	Q _m , M ² cfd	.336							
2	T _w	520							
3	T _s	587							
4	T _e	554							
5	Z _e	.957							
5a	T _e Z _e	530.3							
6	G _m H / T _e Z _e	8.075							
7	e ^s	1.354							
8	(1 - e ^{-s})	.261							
9	P _t or P _c	190.4							
10	P _t ² or P _c ² (thous.)	36.3							
11	F _c	25.13							
12	F ₁ = F _c T _e Z _e / 540	24.68							
13	F ₁ Q _m	8.291							
14	Y = (F ₁ Q _m) ² L/H	68.75							
15	R ² = Y (1 - e ^{-s})	17.94							
16	P _w ² = P _t ² + R ²	54.2							
17	P _s ² = e ^s P _w ² (thous.)	73.4							
17a	^{-or-} P _f ² = e ^s P _c ² (thous.)								
18	P _s or P _f	271.0							
19	P _e	230.7							
20	P _r	.35							
21	T _r	1.38							
22	Z _e	.957							

RECEIVED
 STATE GEOLOGICAL COMMISSION
 OCT 19 1978
 CONSERVATION DIVISION
 Wichita, Kansas