

Pick #  
2-5-79

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

TYPE TEST:  Deliverability  Open Flow TEST DATE: 4-18-79

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

COUNTY: Meade LOCATION: SECTION 25 TWP: 4S34 RNG: 29W ACRES: APR 25 1979

FIELD: Morrow RESERVOIR: PIPELINE CONNECTION: ANB KOC 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. I.D. SET AT 5850 PERF. TO

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

PRODUCING THRU: Tubing RESERVOIR TEMPERATURE F: 127 BAR. PRESS - P<sub>a</sub>: 14.4 Psia

GAS GRAVITY - G<sub>g</sub>: .686 % CARBON DIOXIDE % NITROGEN API GRAVITY OF LIQUID

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

SHUT-IN PRESSURE: SHUT IN 4-15 19 79 AT 8:00 (AM)(PM) TAKEN 4-18 19 79 AT 11:00 (AM)(PM) XXX

FLOW TEST: STARTED 4-18 19 79 AT 11:00 (AM)(PM) TAKEN 4-19 19 79 AT 9:00 (AM)(PM) XXX

OBSERVED DATA

DURATION OF SHUT-IN HR.

SHUT-IN OR FLOW	ORIFICE SIZE in.	(METER) PRESSURE psig	DIFF. in. (h <sub>w</sub> )(h <sub>d</sub> )	FLOWING TEMP. t	WELL-HEAD TEMP. t	CASINO WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P <sub>w</sub> )(P <sub>t</sub> )(P <sub>c</sub> ) psia	psig	(P <sub>w</sub> )(P <sub>t</sub> )(P <sub>c</sub> ) psia		
SHUT-IN								401	415.4	72	
FLOW	.750	149	5	60				155	169.4	24	

RATE OF FLOW CALCULATIONS

P<sub>cr</sub> 670 T<sub>cr</sub> 378

COEFFICIENT (F <sub>b</sub> )(F <sub>d</sub> ) Mcfd	(METER) PRESSURE psia	EXTENSION √P <sub>m</sub> h <sub>w</sub>	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP. F <sub>t</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R Mcfd	GOR	G <sub>m</sub>
2.793	163.4	28.58	1.207	1.000	1.018	98		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 172.6 ; (P<sub>w</sub>)<sup>2</sup> = 30.1 ; P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>a</sub>)<sup>2</sup> = 0.207 (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>a</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	$\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	LOG [ ]	"n"	n x LOG [ ]	ANTILOG	OPEN FLOW DELIVERABILITY EQUALS R x ANTILOG Mcfd
172.4	142.4	1.2103	.082887	.810	.067181	1.1672	115

OPEN FLOW 115 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 24 day of April 1979

CONSERVATION DIVISION  
Wichita, Kansas  
Thurmond-McGlothlin Inc.  
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 4-18-79

% CO<sub>2</sub> \_\_\_\_\_ Q<sub>m</sub> .686 P<sub>cr</sub> 670 T<sub>cr</sub> 378 FLOW STRING 1-1/4

% N<sub>2</sub> \_\_\_\_\_ H 5850 Q<sub>mH</sub> 4013 L/H 1.000 I.D. 1.380

RATE

LINE	TRIAL													
1	Q <sub>m</sub> , M <sup>2</sup> ofd	.698												
2	T <sub>w</sub>	520												
3	T <sub>e</sub>	587												
4	T <sub>o</sub>	554												
5	Z <sub>o</sub>	.958												
5a	T <sub>o</sub> Z <sub>o</sub>	530.7												
6	Q <sub>m</sub> H / T <sub>o</sub> Z <sub>o</sub>	7.561												
7	e <sup>s</sup>	1.328												
8	(1 - e <sup>-s</sup> )	.247												
9	P <sub>t</sub> or P <sub>c</sub>	169.4												
10	P <sub>t</sub> <sup>2</sup> or P <sub>c</sub> <sup>2</sup> (thous.)	28.7												
11	F <sub>c</sub>	25.13												
12	F <sub>1</sub> = F <sub>c</sub> T <sub>o</sub> Z <sub>o</sub> / 540	24.70												
13	F <sub>1</sub> Q <sub>m</sub>	2.40												
14	Y = (F <sub>1</sub> Q <sub>m</sub> ) <sup>2</sup> L/H	5.90												
15	R <sup>2</sup> = Y (1 - e <sup>-s</sup> )	1.45												
16	P <sub>w</sub> <sup>2</sup> = P <sub>t</sub> <sup>2</sup> + R <sup>2</sup>	30.1												
17	P <sub>s</sub> <sup>2</sup> = e <sup>s</sup> P <sub>w</sub> <sup>2</sup> (thous.)	40.0												
17a	P <sub>s</sub> <sup>2</sup> = e <sup>s</sup> P <sub>c</sub> <sup>2</sup> (thous.)													
18	P <sub>s</sub> or P <sub>c</sub>	200.1												
19	P <sub>s</sub> or P <sub>c</sub>	184.7												
20	P <sub>s</sub> or P <sub>c</sub>	.28												
21	L/H	1.38												
22	Z <sub>o</sub>	.958												

RECEIVED  
 OIL AND GAS  
 DIVISION  
 MAY - 2 1979  
 STATE OF OKLAHOMA  
 OIL AND GAS COMMISSION