NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Blinebry** Formation **Blinebry** County **Lea**

Initial **X** Annual _____ Special _____ Date of Test **10/27/61**

Company **Socony Mobil Oil Company, Inc.** Lease **Corrigan Gas Unit** Well No. **7**

Unit **P** Sec. **33** Twp. **21-S** Rge. **37-E** Purchaser **Northern Natural Gas Company**

Casing **5½"** Wt. **17#** I.D. **4.892** Set at **7446'** Perf. **5546'** To **5824'**

Tubing **2"** Wt. **4.7#** I.D. **1.995** Set at **6063'** Perf. **6018'** To **6208'**

Gas Pay: From **5546'** To **5824'** L **5546** xG **0.701** -GL **3888** Bar.Press. **13.2**

Producing Thru: Casing **X** Tubing _____ Type Well **G/G Dual**
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: **10/14/61** Packer **@ 5970'** Reservoir Temp. **116° F**

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter) Type Taps **Pipe**

	Flow Data					Tubing Data		Casing Data		
No.	~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
SI								1328	78	70 hrs. 30 mins.
1.	4.026	2.250	482	1.10	76			1248	80	3 hrs. 10 mins.
2.	4.026	2.250	493	3.30	68			1131	82	3 hrs.
3.	4.026	2.250	494	5.05	72			968	84	4 hrs. 15 mins.
4.	4.026	2.250	490	11.00	73			710	85	4 hrs. 30 mins.
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F_t	Gravity Factor F_g	Compress. Factor F_{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	40.53	23.34	495.2	0.9850	0.9252	1.055	909.5
2.	40.53	40.87	506.2	0.9924	0.9252	1.061	1613.7
3.	40.53	50.61	507.2	0.9887	0.9252	1.059	1987.0
4.	40.53	74.40	503.2	0.9877	0.9252	1.059	2918.0
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio **44,954*** cf/bbl.
Gravity of Liquid Hydrocarbons **44.6** deg.
F_c **1.812** $(1-e^{-s})$ **0.235**

Specific Gravity Separator Gas **0.701**
Specific Gravity Flowing Fluid **0.764***
P_c **1341.2** P_c^2 **1798.8**

No.	P_w / Pt (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$(F_cQ)^2 (1-e^{-s})$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	1261.2	1591	1.648	2.716	0.638	1591.6	207.2	1261.7	.941
2.	1144.2	1309	2.924	8.550	2.009	1317.6	481.2	1146.0	.856
3.	981.2	963	3.600	12.960	3.046	966.0	832.8	982.9	.733
4.	723.2	523	5.287	27.952	6.569	529.6	1269.2	728.0	.543
5.									

Absolute Potential: **3768** MCFPD; n **0.65**
COMPANY **Socony Mobil Oil Company, Inc.**
ADDRESS **Box 2406, Hobbs, New Mexico**
AGENT and TITLE *H. I. Fowler* **Production Engineer**
WITNESSED _____
COMPANY _____

REMARKS

*** GOR and Specific Gravity for 4th rate only.**
Well did not produce liquid until 4th rate.

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w). MCF/da. @ 15.025 psia and 60° F.

P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater. psia

P_w = Static wellhead working pressure as determined at the end of flow period. (Casing if flowing thru tubing, tubing if flowing thru casing.) psia

P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if flowing through casing.) psia

P_f = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

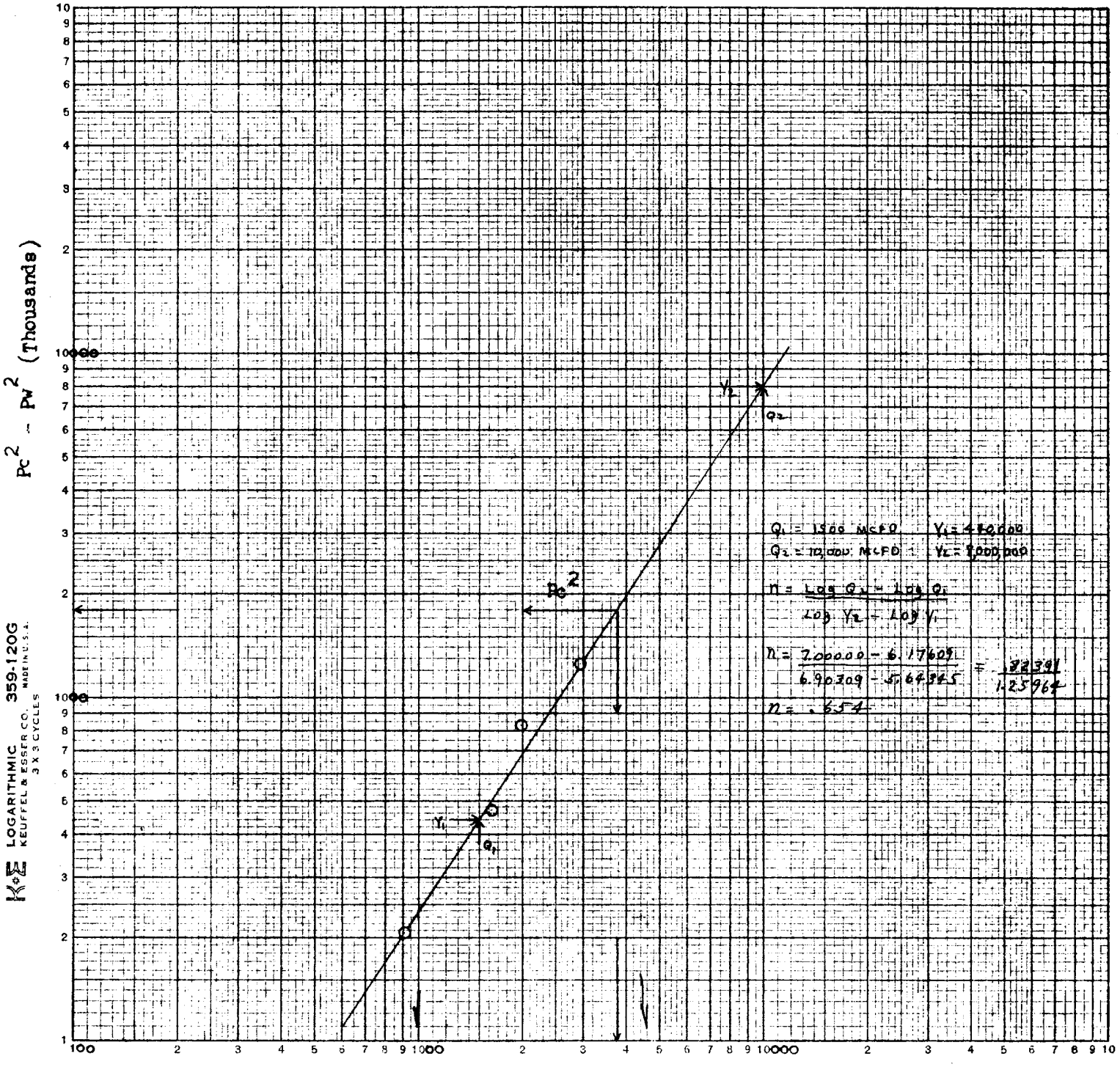
F_t = Flowing temperature correction factor.

F_{pv} = Supercompressability factor.

n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t.

COMPANY : Socony Mobil Oil Co any, Inc.
Well H. Corrigan 7-C
Location: P 33-21S-37E
County: Lea
Date: 10/27/61



Q - MCFD - 15.025 PSIA

$Q_2 = 4600 - 662755$

$Q_1 = 1000$