NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool **Jalmat** Formation **Yates** County **Lea**

Initial ____ Annual ____ Special **X** Date of Test **5-6/5-10 1957**

Company **R. Olsen Oil Company** Lease **Courtland Meyer** Well No. **2**

Unit **M** Sec. **5** Twp. **24** Rge. **37** Purchaser **El Paso Natural Gas Company**

Casing **7"** Wt. ____ I.D. ____ Set at **3448** Perf. ____ To ____

Tubing **2"** Wt. ____ I.D. ____ Set at **3550** Perf. ____ To ____

Gas Pay: From **3107** To **3152** L **3107** xG **0.645** -GL **2004** Bar.Press. **13.2**

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

Date of Completion: **11-1-1954** Packer **3422** Reservoir Temp. ____

OBSERVED DATA

Tested Through ~~(Prover)(Choke)~~ (Meter) Type Taps ____

No.	Flow Data ~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI								900		72
1.	4	1.000	548	4.84	93			769		24
2.	4	1.000	517	13.69	104			717		24
3.	4	1.000	522	23.52	106			679		24
4.	4	1.000	523	35.40	76			634		24
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.	6.135	52.11		.9697	.9645	1.046	313
2.	6.135	85.18		.9602	.9645	1.037	502
3.	6.135	112.18		.9585	.9645	1.039	661
4.	6.135	137.75		.9850	.9645	1.050	842
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas **0.645**

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

F_c **0.740** $(1-e^{-s})$ **0.129** P_c **913.2** P_c^2 **833.9**

No.	~~P_w~~ P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	~~P_w~~ P_c
1.	782.2	611.8	0.23	0.05	0.006	611.8	222.1	
2.	730.2	533.2	0.37	0.14	0.018	533.2	300.7	
3.	692.2	479.1	0.49	0.24	0.031	479.1	354.8	
4.	647.2	418.9	0.62	0.38	0.049	418.9	415.0	
5.								

Absolute Potential: **1,675** MCFPD; n **1.000**

COMPANY **R. Olsen Oil Company**

ADDRESS **2805 Liberty Bank Building, Oklahoma City, Oklahoma**

AGENT and TITLE **Philip Randolph, Vice President**

WITNESSED ____

COMPANY ____

REMARKS

Second test on this well. Good pull down, spread and point alignment - but resulting slope in excess of 1.000 A slope of 1.000 was drawn through the point corresponding to the highest rate of flow. First test also had slope in excess of 1.000.

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.