

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Formation Queen County Lee  
Initial Annual Special X Date of Test 1-7 to 1-11-57  
Company Continental Oil Company Lease Mayer B-1 Well No. 7  
Unit R Sec. 4 Twp. 21S Rge. 36E Purchaser E. P. N. G.  
Casing 5 1/2 Wt. 17 I.D. 4.892 Set at 3510 Perf. 3336 To 3510  
Tubing 2 1/2 Wt. 6.5 I.D. 2.441 Set at 3698 Perf. 3336 To 3510  
Gas Pay: From 3336 To 3510 L 3336 xG .670 -GL 2235 Bar.Press. 13.2  
Producing Thru: Casing X Tubing 3698 Type Well G. O. Dual  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 12-31-55 Packer 3698 Reservoir Temp. 90°

## OBSERVED DATA

Tested Through (Pressure) (Choke) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								946		72
1.	4	1.500	546	96.04	73			885 *		24
2.	4	1.500	551	73.96	76			889		24
3.	4	1.500	530	53.29	78			900		24
4.	4	1.500	547	25.00	84			917		24
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	231.70		.9877	.9463	1.084	3283
2.	13.99	204.24		.9850	"	1.087	2895
3.	13.99	170.10		.9831	"	1.081	2393
4.	13.99	118.32		.9777	"	1.079	1652
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.  
Gravity of Liquid Hydrocarbons deg.  
F<sub>c</sub> 2.507 (1-e<sup>-s</sup>) .143

Specific Gravity Separator Gas           
Specific Gravity Flowing Fluid           
P<sub>c</sub> 959.2 P<sub>c</sub><sup>2</sup> 920.1

No.	P <sub>yk</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> /P <sub>c</sub>
1.	898.2	806.8	3.23	67.73	9.7	816.5	103.6	903.6	.94 *
2.	902.2	813.9	7.26	52.71	7.5	821.4	98.7	906.3	.94
3.	913.2	833.9	6.00	36.00	5.1	839.0	81.1	916.0	.95
4.	930.2	865.3	4.14	17.14	2.5	867.8	52.3	931.6	.97
5.									

Absolute Potential: 20,000 MCFPD; n .87

COMPANY Continental Oil Company  
ADDRESS Box 427, Hobbs, New Mexico  
AGENT and TITLE W. D. Howard, Gas Tester  
WITNESSED           
COMPANY         

## REMARKS

\* Insufficient drawdown due to small orifice.

CC: NMCCC-3 ENW BLJ RLA PTE EVB WDH  
attach.

## 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  $P_t$ .