

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBBS OFFICE OCC

1957 JAN 10 PM Form 103-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Permian County Lea

Initial Annual Special X Date of Test 8-13 to 8-17-56

Company Continental Oil Company Lease Mayer B-4 Well No. 14

Unit C Sec. 4 Twp. 21S Rge. 36E Purchaser EPNG

Casing 5 1/2 Wt. 14.0 I.D. Set at 3699 Perf. To

Tubing None Wt. I.D. Set at Perf. To

Gas Pay: From 3340 To 3506 L 3340 xG .665 -GL 2221 Bar.Press. 13.2

Producing Thru: Casing X Tubing Type Well Single

Date of Completion: 12-3-53 Packer None Single-Bradenhead-G. G. 985 G.O. Dual
Reservoir Temp.

OBSERVED DATA

Tested Through Prover Choke (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								967		72
1.	4	1.500	592	8.7 ²	62			795*		24
2.	4	1.500	588	6.8 ²	61			832		24
3.	4	1.500	622	5.1 ²	64			856		24
4.	4	1.500	606	2.9 ²	65			900		24
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	13.99	214.00		.9981	.9498	1.068	3031
2.	13.99	166.70		.9990	.9498	1.062	2350
3.	13.99	128.51		.9962	.9498	1.069	1818
4.	13.99	72.15		.9952	.9498	1.062	1013
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.
Gravity of Liquid Hydrocarbons deg.
F_c .9002 (1-e^{-s}) .142

Specific Gravity Separator Gas
Specific Gravity Flowing Fluid
P_c 980.2 P_c² 960.8

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w / P _c
1.	808.2	653.2	2.7	7.3	1.0	654.2	306.6	808	.82
2.	845.2	714.4	2.1	4.4	0.6	715.0	245.8	845	.86
3.	869.2	755.5	1.6	2.6	0.4	755.9	204.9	869	.87
4.	913.2	833.9	0.9	.8	0.1	834.0	126.8	913	.93
5.									

Absolute Potential: 9,500 MCFPD; n 1.000

COMPANY Continental Oil Company

ADDRESS Box 427, Hobbs, New Mexico

AGENT and TITLE W. D. Howard, Gas Tester

WITNESSED

COMPANY

REMARKS

*Well would not draw down 30% producing into line.

This well was previously tested ending 6-22-56 using proper sequence of rates.

A slope of 1.000 was drawn through highest data point on above test since on both tests n was greater than 1.000.

ELVIS A UT
GAS ENGINEER

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 .