

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 2-15-57

Company R. Olsen Oil Company Lease S. R. Cooper Well No. 1

Unit H Sec. 23 Twp. 24 S Rge. 36 E Purchaser El Paso Natural Gas Company

Casing 7" Wt. 24.04 I.D. 6.336 Set at 2937 Perf. To

Tubing 2" Wt. 4.74 I.D. 1.995 Set at 3040 Perf. To

Gas Pay: From 3025 To 3105 L 3025 xG .670 -GL 2027 Bar.Press. 13.2

Producing Thru: Casing Tubing X Type Well Single

Date of Completion: 11-1-52 Packer -- Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp.

OBSERVED DATA

Tested Through ~~Pressure Transducer~~ (Meter) Type Taps

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Orifice) Size	(Transducer) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						714				72
1.	2	.125	565		74	570				3
2.	2	.187	356		69	359				3
3.	2	.218	281		57	282				3
4.	2	.250	230		51	231				3
5.	2	.250	222		56	224				24

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.	.3418		578.2	.9868	.9463	1.060	196
2.	.7851		369.2	.9915	.9463	1.038	282
3.	1.0834		294.2	1.0029	.9463	1.033	312
4.	1.4030		243.2	1.0078	.9463	1.028	335
5.	1.4030		235.2	1.0039	.9463	1.025	321

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio cf/bbl.

Gravity of Liquid Hydrocarbons deg.

F_c 9.936 (1-e^{-s}) .130

Specific Gravity Separator Gas

Specific Gravity Flowing Fluid

P_c 727.2 P_c² 528.8

No.	$\frac{P_w}{P_t}$ (psia)	P _t ²	F _c Q	(F _c Q) ²	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P _w ²	P _c ² -P _w ²	$\frac{P_c^2 - P_w^2}{F_c Q}$	$\frac{P_c^2 - P_w^2}{F_c Q}$
1.	383.2	340.1	1.9	3.6	.46	341.0	187.8		
2.	372.2	138.5	2.8	7.8	1.0	139.5	389.3		
3.	295.2	87.1	3.1	9.6	1.2	88.3	440.5		
4.	244.6	59.6	3.3	10.8	1.4	61.0	467.8		
5.	237.2	56.2	3.1	9.6	1.2	57.4	471.4		

Absolute Potential: 350 MCFPD; n .878

COMPANY R. Olsen Oil Company

ADDRESS 2805 Liberty Bank Building, Oklahoma City, Oklahoma

AGENT and TITLE Philip Randolph, Vice President

WITNESSED

COMPANY

REMARKS

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 .