

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubb Formation Tubb County Lea

Initial _____ Annual _____ Special X Date of Test 8-9/8-16 1957

Company R. Olsen Oil Company Lease Cone Well No. 1 Tbg.

Unit J Sec. 26 Twp. 21 Rge. 37 Purchaser El Paso Natural Gas Company

Casing 5 1/2" Wt. 15.5# I.D. _____ Set at 6450 Perf. _____ To _____

Tubing 2" Wt. 4.7# I.D. _____ Set at 6100 Perf. _____ To _____

Gas Pay: From 6105 To 6258 L 6105 xG Mix 0.730 -GL 4457 Bar.Press. 13.2

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

Date of/Completion: 12-12-1954 Packer _____ Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~Pressure~~ (Choke) (Meter) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1644/1662/1670				24/48/72
1.	4	1.250	538	9.61	77	1447				24
2.	4	1.250	538	16.00	74	1307				24
3.	4	1.250	567	22.56	76	1165				24
4.	4	1.250	573	32.49	76	921				24
5.										

FLOW CALCULATIONS

No.	Coefficient (F _{lg}) (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	Bbls. Oil prod. 24 hr.
1.	9.643	72.77		.9840	.9292	1.057	679	9.6
2.	9.643	93.89		.9868	.9292	1.061	851	12.38
3.	9.643	114.39		.9850	.9292	1.060	1070	17.18
4.	9.643	137.98		.9850	.9292	1.060	1291	17.19
5.								

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 69.051 cf/bbl.
Gravity of Liquid Hydrocarbons 70 deg.
F_c 9.936 (1-e^{-s}) 0.264

Specific Gravity Separator Gas 0.695
Specific Gravity Flowing Fluid 0.7022
P_c 1683.2 P_c 2,833.2

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	10000 P_w	P_w P_c
1.	1480.2	2132.2	6.75	45.56	12.03	2144.2	689.0		
2.	1320.2	1742.9	8.46	71.57	18.89	1761.8	1071.4		
3.	1178.2	1388.2	10.63	113.00	29.83	1418.0	1415.2		
4.	934.2	872.7	12.83	164.61	43.46	916.2	1917.0		
5.									

Absolute Potential: 1,650 MCFPD; n 0.635

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} = Supercompressibility 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 .